

DVTel Altitude Cameras
HD Classic Mini-Dome Camera

User Manual

Ver1.1

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1. Overview

The DVTel Altitude HD Classic Mini-Dome Camera employs the latest H.264 video compression technology to provide real-time HD quality images at the lowest bandwidth and storage costs. The modular design permits the entire camera assembly to be interchanged with other Altitude Mini-dome cameras so that the camera capabilities can be matched with the ever changing viewing environment.

With its compact and sophisticated vandal resistant mechanical design, the HD Classic Mini-Dome Camera is easy installed and offers great aesthetics.

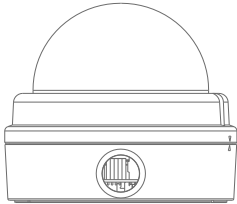
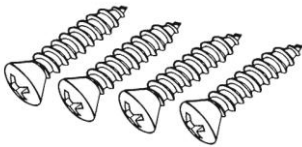
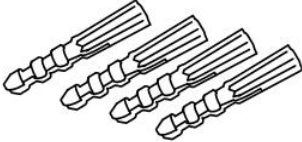
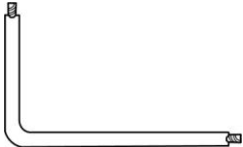
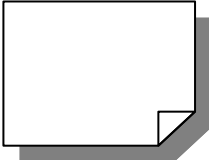
1.1 Features

- Sony Progressive ExView CCD
- Dual stream H.264/ MPEG-4video
- Resolution: HD 720p, 1280x960, D1, VGA, QVGA, & CIF
- Frame Rate: Real-time 30FPS at HD720p
- Image Settings:
 - Rotation: Flip, Mirror, and 180 Rotate
 - Brightness, Sharpness, Contrast, White Balance, Exposure Control
 - Digital Zoom: x1 ~ x16
- Built-in WDR, 2D/3D Noise Reduction, & True Day/Night with IR filter removal
- Two-way audio support
- Weatherproof IP66 / NEMA 4 international standards
- Security Torx fasteners used to resist tampering
- 3-axis (pan/tilt/rotation) position adjustment
- Built-in heater and fan; optional
- 4S mount support

*Features might be different from model selection.

1.2 Package Contents

Please check the package contains the following items listed below.

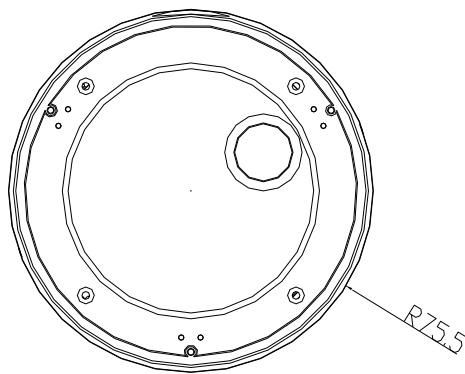
 HD Classic Mini-Dome Camera	 AC/DC Power Cable Not required for POE operation	
 Self Tapping Screws (×4)	 Plastic Screw Anchors (×4)	 Security Torx
 CD (bundled software and documentation)	 Quick Guide	

2. Introduction: HD Mini-Dome Camera

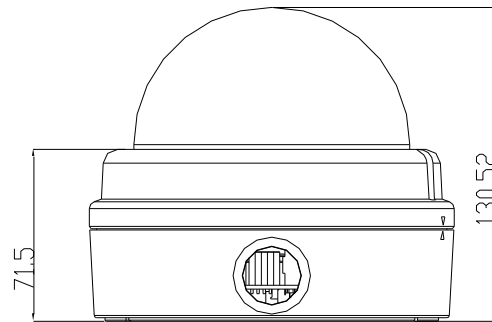
This chapter will provide the camera dimensions for reference before installation. Definition of each connector on the camera's PCB board will also be specified.

2.1 Camera Dimensions

The HD Mini-Dome Camera's dimensions are shown below.



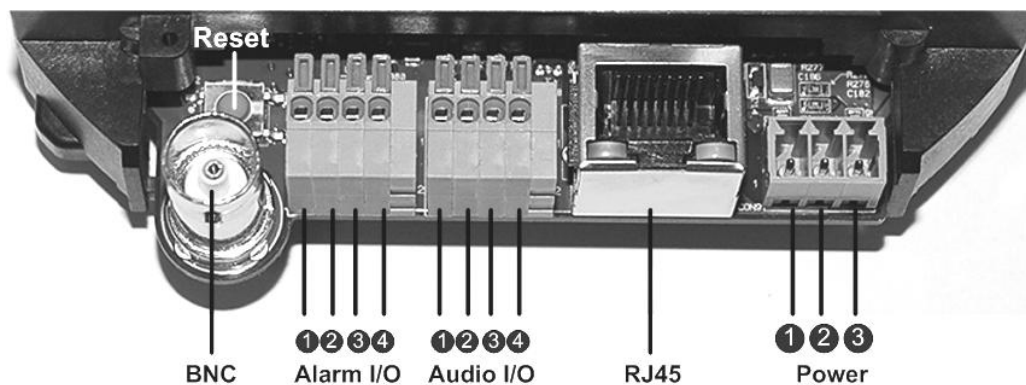
Top View



Side View

2.2 Camera's Connectors

The diagram below shows the HD Mini-Dome Camera's reset button and various connectors. Definition for each connector will be given as follows.



Connector		Pin No.	Definition	Remarks
Reset Button		-	Restore to factory default	
BNC		-	Analog Video Output - Requires Configuration	
Alarm I/O		1	Output +	Alarm connection
		2	Output -	
		3	Input +	
		4	Input -	
Audio I/O		1	Input	Two-way audio transmission
		2	GND	
		3	Output (R)	
		4	Output (L)	
RJ45		-	10/100 Ethernet / with PoE Support	
Power	DC 12V	1	DC+	Power connection
		2	Reserved	
		3	GND	
	AC 24V	1	Power-1	
		2	Earth GND	
		3	Power-2	

3. System Requirements

To set up & view the HD Mini-Dome Camera via web browser, please ensure your PC meets the minimum system requirements as described below.

Items	System Requirement
Personal Computer	1. Intel® Pentium® M, 2.16 GHz or Intel® Core™2 Duo, 2.0 GHz 2. 2 GB RAM or more
Operating System	Windows VISTA or Windows XP
Web Browser	Microsoft Internet Explorer 6.0 or later
Network Card	10Base-T (10 Mbps) or 100Base-TX (100 Mbps) operation
Viewer	Enabled ActiveX control plug-in for Microsoft IE

4. Installation

Please read the instructions provided in this chapter thoroughly before installing the HD Classic Mini-Dome Camera.

4.1 Power and Ethernet Cable Connection

Power Connection

Make sure the camera's power cable is correctly connected; refer to the pin definition table in section [2.2 Camera's Connectors](#). If using Power over Ethernet (PoE), make sure to connect to an 802.3af or 802.3at POE switch or power injector.

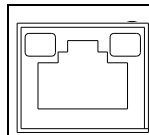
Ethernet Cable Connection

Use of Category 5 Ethernet cable is recommended for network connection; to have best transmission quality, cable length shall not exceed 100 meters. Connect one end of the Ethernet cable to the RJ-45 connector of the HD Mini-Dome Camera, and the other end of the cable to the network switch or PC.



NOTE: In some cases, you may need use an Ethernet crossover cable when connecting the HD Mini-Dome Camera directly to the PC.

Check the status of the link indicator and activity indicator LEDs; if the LEDs are unlit, please check LAN connection.



Green Link Light indicates good network connection.
Orange Activity Light flashes for network activity indication.

4.2 Surface or 4S Box Mounting

The HD Classic Mini-Dome Camera can be installed directly on a wall or ceiling or to a standard 4S electrical box. Please note that the wall or ceiling must have enough strength to support the HD Mini-Dome Camera.

Follow the steps below to install the HD Mini-Dome Camera:

Step 1:

Unpack the HD Classic Mini-Dome Camera package and take out the HD Mini-Dome Camera.

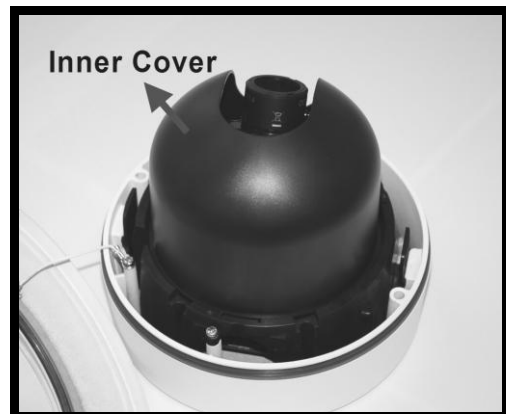
Step 2:

Use the supplied Security Torx to unscrew the two Torx screws on the side of the Dome Cover, as shown in the figure, and open the Dome Cover.



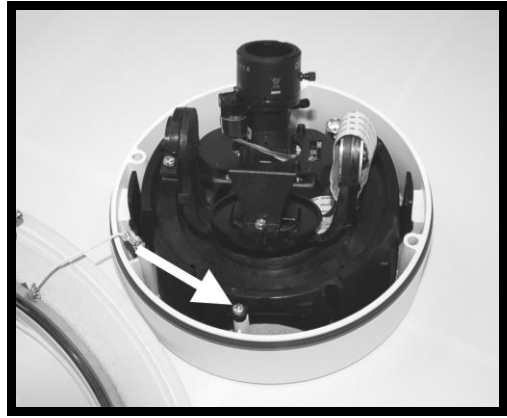
Step 3:

Press both sides of the Inner Cover and remove it from Mini-Dome Camera unit.

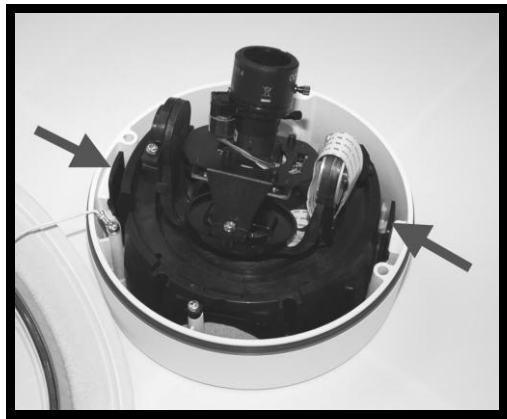


Step 4:

Unscrew the shipping screw that secures the camera chassis to the housing.

**Step 5:**

Press the sides of the snap-in module, as indicated in the figure, and detach it from Mini-Dome Camera's housing.

**Step 6:**

For 4S box mounting: Remove the bottom conduit plug with a coin and insert the cables through the conduit hole. Attach the housing directly to the standard 4S electrical box and skip to Step 10.

Surface Mounting: Mark the positions of the four screw holes in the base of Mini-Dome Camera at the chosen installation location. Mark an additional hole for the cables to enter through the bottom conduit opening if desired.

Step 7:

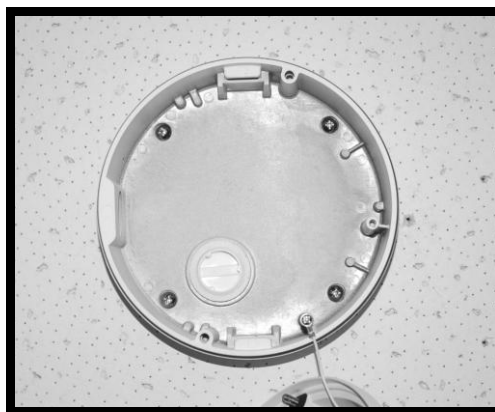
In the marked locations, drill each hole slightly smaller than the supplied screw anchors.

Step 8:

Put supplied anchors into these drilled holes.

Step 9:

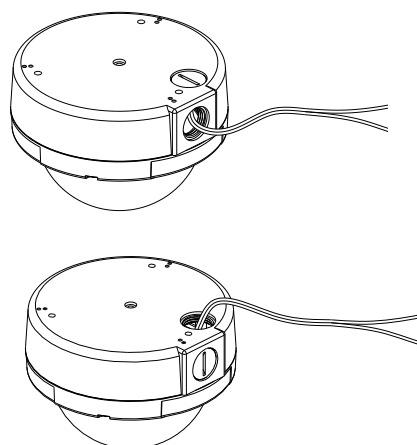
Fasten Mini-Dome Camera's housing with the four equipped self tapping screws.

**Step 10:**

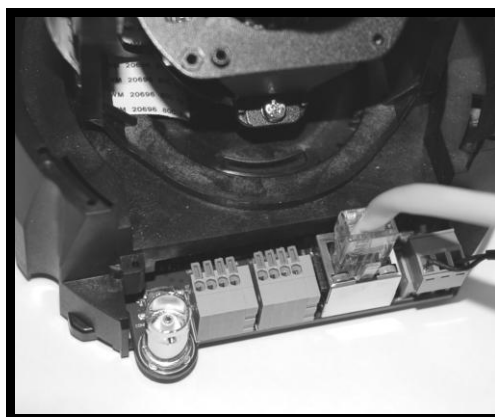
Thread the power and Ethernet cables through either the side conduit entry or back conduit entry, as illustrated. Users may use a coin to loosen the conduit entry block.



NOTE: The Power Cable is omitted if using PoE.

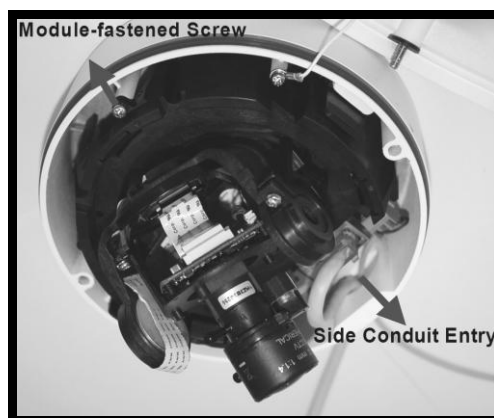
**Connect the Cable(s) to the Unit**

Connect the power and Ethernet connectors (on Mini-Dome Camera unit) with their cables respectively, as shown in the figures.



Step 11:

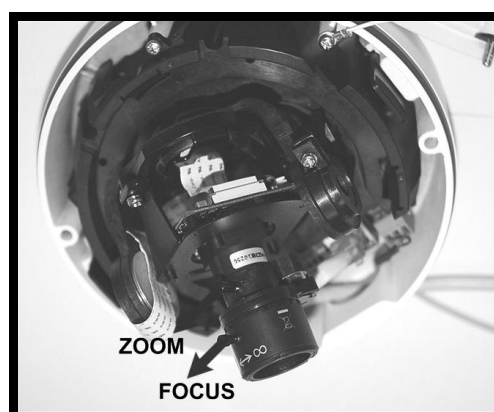
Position the camera chassis with the terminal blocks facing the side conduit hole. While guiding the cables attach the snap-in chassis into Mini-Dome Camera housing, and retighten the module-fastened screw to secure the camera module.

**STEP 12:**

Access the camera browser-viewer for viewing images. Please refer to [Chapter 5. Accessing Camera](#) for further details. Users can also use the camera's BNC connector for video output by choosing BNC as one streaming type in the web "Streaming" configuration before using the BNC..

Step 14:

Adjust the camera's focus and viewing angle via zoom and focus ring screws.

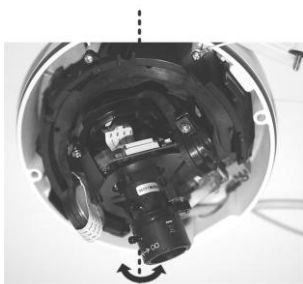


Step 15:

Caution: The tilt adjustment has a locking clamp screw which must be loosened before moving the tilt. Do not use too much force or the camera could be damaged.



Adjust the camera to a desired angle, as shown below. Pan adjustment range is nearly 360°; rotation angle range approaches to 270°. Tilt is adjustable between -10° ~ 90°.



Pan Adjustment



Rotation Adjustment



Tilt Adjustment



NOTE: Adjust the lens carefully within the limits mentioned above, or the cables underneath would be harmed.

STEP 16:

Put the Inner Cover back to Mini-Dome Camera unit.



STEP 17:

Replace the dome cover, aligning the arrow mark on the dome cover with the one on the housing as shown in the figure.



STEP 18:

Tighten the two Torx screws on the side of the dome cover to fasten the dome cover. Camera installation is complete.

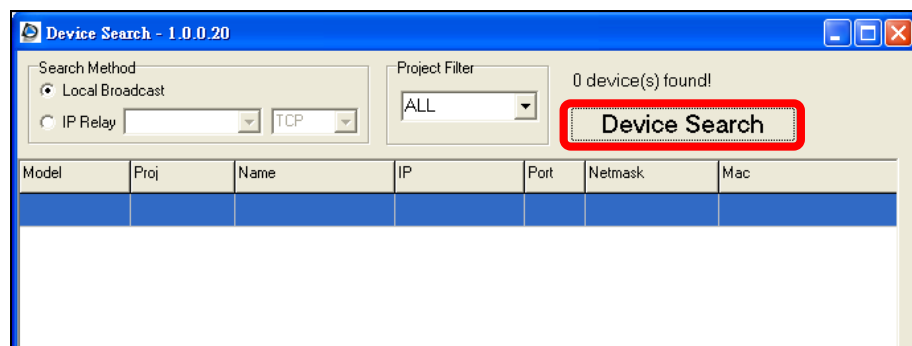


5. Accessing Camera

For initial access to the HD Mini-Dome Camera, users can search for and configure the network settings of the camera through the installer program: DeviceSearch.exe, which can be found in the supplied CD or by selecting the HD Classic button from the Unified Configurator found in the Latitude AdminCenter under the “Applications” Tab.

Device Search Software Setup

Step 1: Double click on the program Device Search.exe (see the icon below); its window will appear as shown below. Then click the “Device Search” button.

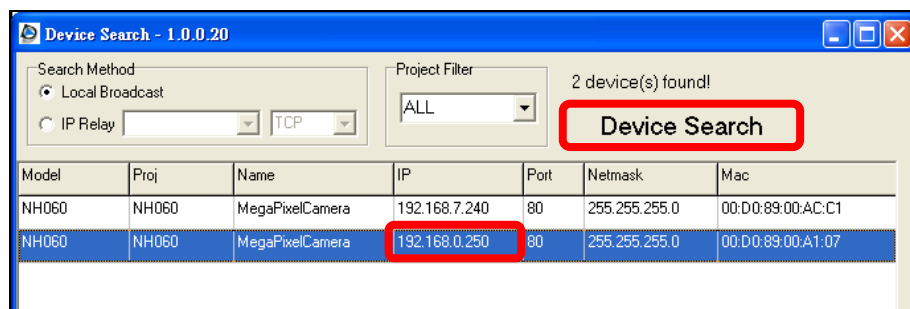


Step 2: The security alert window might pop up. Click “Unblock” to continue.



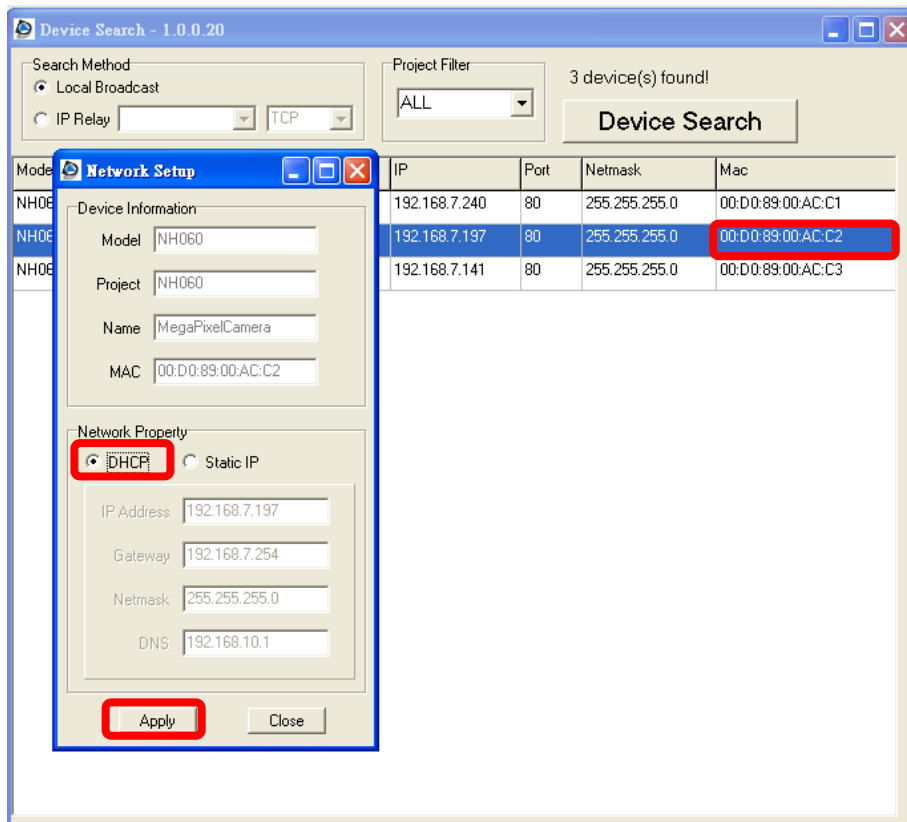
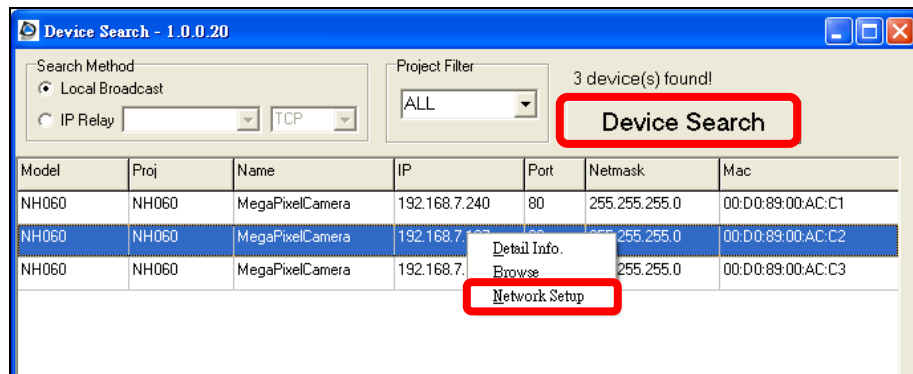
Device Search

Step 3: Click “Device Search” again, and all the finding IP devices will be listed in the page, as shown in the figure below. The HD Mini-Dome Camera’s default IP address is: **192.168.0.250**.



Users can change the HD Mini-Dome Camera’s network IP address and settings as follows:

Step 1: In the device list, click on the Camera that you would like to change. On the selected item, right click and select “Network Setup.” Note that the HD Mini-Dome Camera’s MAC address shown is the camera’s serial number.



Step 2: The “Network Setup” page will pop up:

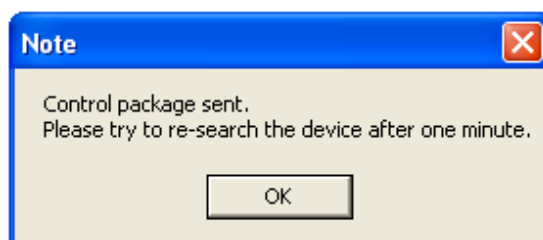
Static IP: It is preferred to set a specific static IP address to each camera used with Latitude. To set the address, click the “Static IP” button and fill in the static information as required.

DHCP: If your network has a DHCP server you may simply select “DHCP” and press the “Apply” button to have the camera automatically get an IP address from the DHCP server, however if using DHCP with Latitude you should set the DHCP server policy to always provide the

same address to the camera or the camera may become unavailable to view or record if the address is later changed automatically.

Note: If you select DHCP and later need to move the camera to a network without a DHCP Server, this setting should be changed to Static IP before moving the camera or the camera may not respond properly without the DHCP Server present. Alternatively you may hold the reset button for more than 10 seconds to restore the factory default network address and proceed with the Static settings.

Step 3: Click “OK” and the camera will be ready in approximately 30 seconds with the new address.



NOTE: At this point the camera is ready to be added to Latitude using the Discovery Tab in AdminCenter. Most camera settings for recording and viewing should be managed by using the Latitude AdminCenter.

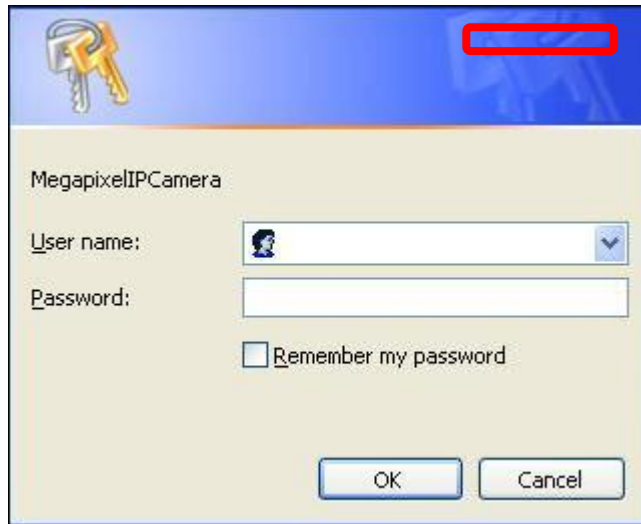
Warning: Some changes made via the camera web interface could result in the camera becoming unavailable for critical viewing or recording and most settings should be managed through the Latitude AdminCenter.

The following section of this document is provided for reference when using the camera web interface.

Step 4: Click the “Device Search” button to re-search all the devices. Then select the Camera with the correct address. Double click on the Camera, and the login window will pop up.

Note: If the log-in window does not pop up automatically, launch the IE browser manually and enter the IP address of the camera in the URL address box at the top.

Step 5: When the log-in window appears enter the default Username and password as shown below..

A screenshot of a login window titled "MegapixelIPCamera". The window has a blue header bar with a key icon on the left and a red rectangular box on the right. Below the header, there are two input fields: "User name:" with a dropdown arrow and a small person icon, and "Password:" with a standard text box. Below these fields is a checkbox labeled "Remember my password". At the bottom of the window are two buttons: "OK" and "Cancel".

The default login ID and password for the Administrator are:

Login ID	Password
Admin	1234



NOTE: ID and password are case sensitive.



NOTE: It is strongly advised that administrator's password be altered for the security concerns. Refer to section [6.3.2 Security](#) for further details.

Installing DC Viewer Software Online

For the initial access to the HD Camera, a client program, DC Viewer, will be automatically installed to your PC when connecting to the HD Camera.

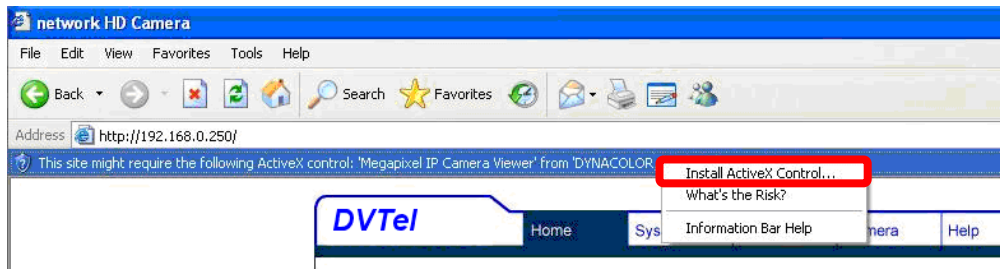
If the Web browser doesn't allow DC Viewer installation, please check the Internet security settings or ActiveX controls and plug-ins settings (see [Appendix B: Internet Security Settings](#)) to continue the process.



NOTE: If there are problems viewing the camera web pages it may be that an older version of the DCViewer was previously installed. If this

happens, it is strongly recommended to delete the old version of the DC vViewer using the “Add or Remove Programs” applet found in the Windows “Control Panel”

After logging in for the first time the Information Bar (just below the URL bar) may pop up and ask for permission to install the ActiveX Control for displaying video in browser (see the figure below). Right click on the Information Bar and select “Install ActiveX Control...” to allow the installation.



Then the security warning window will pop up. Click “Install” to carry on software installation.

Click “Finish” to close the DC Viewer window when the download is finished. For the detailed software download procedure, please refer to [Appendix C: DC Viewer Download Procedure](#).

Once the DC Viewer is installed, users will see the Home page as shown below:



6. Configuration & Operation

While the HD Mini-Dome Camera is provided with a user-friendly browser-based configuration interface, making setting changes using the Web interface could result in the camera becoming unavailable for critical viewing and recording. It is highly recommended that the camera settings be managed via the Latitude AdminCenter.

In this chapter, information about main page introduction, system related settings and camera settings will be described in detail.

For further information about CMS software, please refer to [Chapter 7. CMS Software Introduction](#) and CMS user manual.

6.1 Browser-based Viewer Introduction

At the bottom of the main page, users can adjust video display size (x1, x1/2 and full screen), select a kind of video format, talk to the remote site (see [6.3.2 Security](#)) and save JPEG snapshots (see [6.3.8 Snapshot](#)).



NOTE: The “talk” button below the screen only displays in HD Classic Fixed Camera and HD Classic Mini-Dome Camera.

There are five tabs: Home, System, Streaming, Camera and Logout on the top panel.

Home

Users can monitor live video of the targeted area.

System setting

Administrator can set host name, system time, root password, network related settings, etc. Further details will be interpreted in section [6.3 System Related Settings](#).

Streaming setting

Administrator can modify video settings and select audio compression mode in this page.

Camera setting

Users can adjust various camera parameters, including <Exposure>, <White Balance>, <Brightness>, <Sharpness>, <Contrast> and <Digital Zoom>.

Logout

Click on the tab to re-login to the HD Mini-Dome Camera with another username and password.

6.2 Home Page

In the Home page, there are several function buttons below the displayed image.



Screen Size Adjustment

Image display size can be adjusted to x1/2 and full screen.

Digital Zoom Control

In the full screen mode, users can adjust the digital PTZ by rotating the mouse wheel (for zoom in/out), and drag the mouse into any direction.

Talk

Talk function allows the local site talks to the remote site. Please refer to section [6.3.2 Security](#): Add user > Talk/Listen for further details. This function is only open to “User” who has been granted this privilege by the Administrator.



NOTE: This function is only available in HD Classic Fixed Camera and HD Classic Mini-Dome Camera.

Snapshot

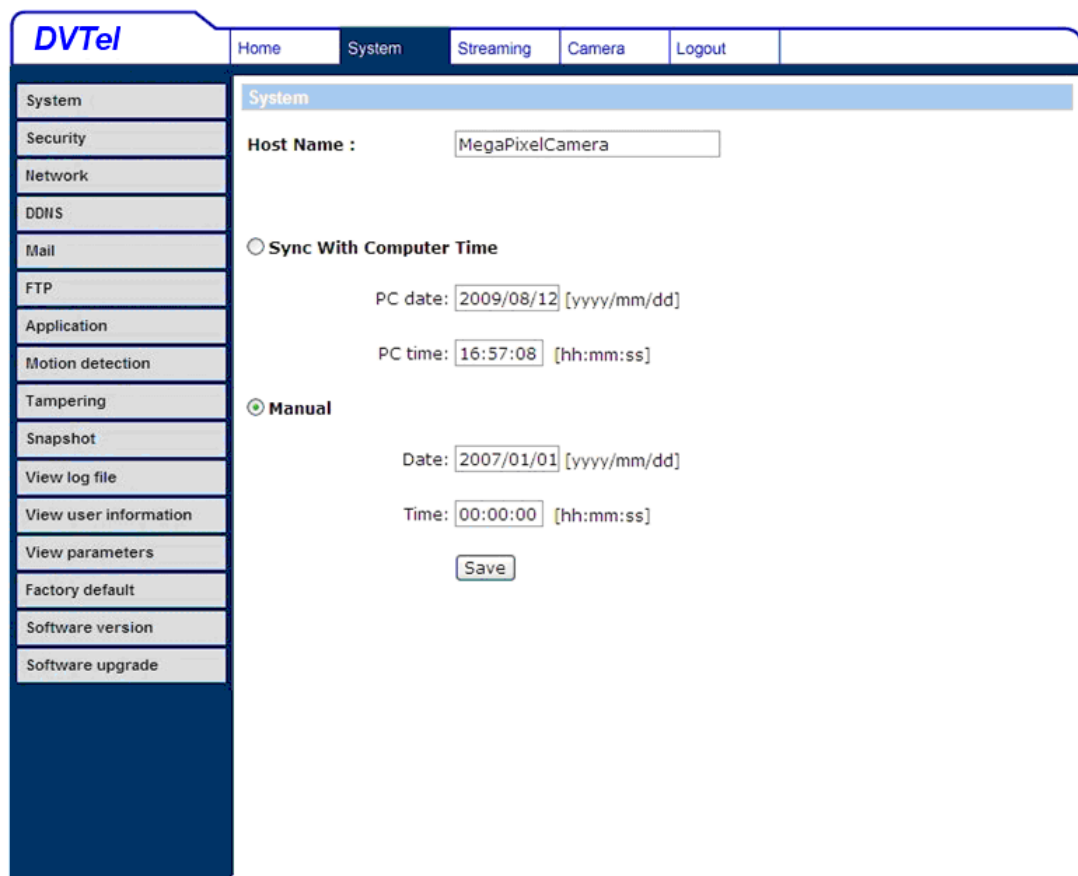
Press the button, and the JPEG snapshots will automatically be saved in the selected location. The default location for saving snapshots is: C:\.

6.3 System Related Settings

The figure below shows all categories under the “**System**” tab. Each category in the left column will be explained in the following sections.



NOTE: The “System” configuration page is only accessible by Administrator.



6.3.1 Host Name and System Time Setting

Click the first category: <System> in the left column; the page is shown as below.

The screenshot shows the DVTel web interface. The top navigation bar includes 'Home', 'System', 'Streaming', 'Camera', and 'Logout'. The left sidebar contains a list of system categories: 'System', 'Security', 'Network', 'DDNS', 'Mail', 'FTP', 'Application', 'Motion detection', 'Tampering', 'Snapshot', 'View log file', 'View user information', 'View parameters', 'Factory default', 'Software version', and 'Software upgrade'. The 'System' category is highlighted with a red box. The main content area displays the 'System' configuration page. It features a 'Host Name' field with the value 'MegaPixelCamera'. Below this, there are two radio buttons: 'Sync With Computer Time' (unselected) and 'Manual' (selected). Under the 'Manual' option, there are fields for 'Date' (2007/01/01) and 'Time' (00:00:00), both with format hints [yyyy/mm/dd] and [hh:mm:ss] respectively. A 'Save' button is located at the bottom of the time settings.

Host Name

The name is for camera identification. If alarm function (see [6.3.7 Application](#)) is enabled and is set to send alarm message by Mail/FTP, the host name entered here will display in the alarm message.

Sync With Computer Time

Select this item and video date and time display will synchronize with the PC's.

Manual

The Administrator can set video date, time and day manually. Entry format should be identical with that shown next to the enter field.

6.3.2 Security

Click the category: <Security>, and the page is shown as the figure below.

The screenshot shows the DVTel web interface. On the left, a vertical menu lists various system functions: System, Security (highlighted with a red box), Network, DDNS, Mail, FTP, Application, Motion detection, Tampering, Snapshot, View log file, View user information, View parameters, Factory default, Software version, and Software upgrade. The main content area is titled 'Security' and contains three sections: 'Admin Password' with input fields for 'Admin password' and 'Confirm password' (both masked with dots) and a 'Save' button; 'Add User' with input fields for 'User name' and 'User password', checkboxes for 'I/O access', 'Camera control', 'Talk', and 'Listen', and an 'Add' button; and 'Manage User' with a 'User name' dropdown menu (currently showing '-- no user --') and 'Delete' and 'Edit' buttons.

Root password

Change the administrator's password by inputting the new password in both text boxes. The input characters/numbers will be displayed as dots for security purposes. After clicking <Save>, the web browser will ask the Administrator for the new password for access. The maximum length of the password is 14 digits.



NOTE: The following characters are valid: A-Z, a-z, 0-9, !#\$%&'-.@^_~.

Add user

Type the new user's name and password and click <Add> to add the new user. Both user name and password can be up to 16 characters. The new user will be displayed in the user name list. There is a maximum of twenty user accounts. Each user can be assigned the privileges of “**Camera control**”, “**Talk**” and “**Listen**”.

- **I/O access**

This item supports fundamental functions that enable users to view video when accessing the camera via the web interface.

- **Camera control**

This item allows authorized Users to change camera parameters on the Camera Setting page.

- **Talk/Listen**

Talk and Listen functions allow authorized users in the local site (PC site) to communicate with remote sites.

Manage User

Delete user

To delete a user, pull down the user list, and select the user name you wish to delete. Then click <Delete> to remove it.

Edit user

Pull down the user list and select a user name. Click <Edit> to edit the user's password and privilege.



NOTE: It is required to enter the User password as well as select the function open to the user. When finished, click <Save> to modify the account settings.

http://192.168.7.234/lang1/server_editaccount.html - Micr...

User name [user]

User password [masked]

☒ I/O access ☐ Camera control

☐ Talk ☐ Listen

Save Close



6.3.3 Network

Warning: Changes to the network settings could make the camera unavailable for critical viewing or recording operations.

Static IP: It is preferred to set a specific static IP address to each camera used with Latitude. To set the address, click the “Use Fixed IP Address” button and fill in the static information as required.

DHCP: If your network has a DHCP server you may simply select “Get IP Address Automatically” and press the “Save” button to have the camera automatically get an IP address from the DHCP server, however if using DHCP with Latitude you should set the DHCP server policy to always provide the same address to the camera or the camera may become unavailable to view or record if the address is later changed automatically.

Note: If you select “Get IP Address Automatically” and later need to move the camera to a network without a DHCP Server, this setting should be changed to Fixed IP before moving the camera or the camera may not respond properly without the DHCP Server present. Alternatively you may hold the reset button for more than 10 seconds to restore the factory default network address and proceed with the Static settings.

Click <Network> in the left column, and the page will display as shown below.

DVTel Home System Streaming Camera Logout

System
Security
Network
DDNS
Mail
FTP
Application
Motion detection
Tampering
Snapshot
View log file
View user information
View parameters
Factory default
Software version
Software upgrade

Network

☐ Get IP address automatically
☒ Use fixed IP address

General

IP address: 192.168.0.250
Subnet mask: 255.255.255.0
Default gateway: 192.168.0.254
Primary DNS: 192.168.10.1
Secondary DNS: 0.0.0.0
Web Server port: 80
Save

Advanced

RTSP port: 554
MJPEG over HTTP port: 8008
Save

Users can choose to use fixed IP address or dynamic (DHCP) IP address. The following is descriptions for the two ways of setting the IP address.

Get IP address automatically (DHCP)

The camera's default setting is "**Use fixed IP address**". Please refer to the previous section [Chapter 5. Accessing Camera](#) for logging in with the default IP address.

If selecting "**Get IP address automatically**", after the HD Mini-Dome Camera restarts, users can search it through the installer program: DeviceSearch.exe, which can be found in "DeviceSearch" folder in the supplied CD.



NOTE: If using DHCP it is convenient to write down the HD Mini-Dome Camera's MAC address, which can be found in the label of the camera, for identification in the future when the automatic IP address might be unknown.

Use fixed IP address

To setup static IP address, select “**Use fixed IP address**” and move the cursor to the IP address blank (as indicated below) and insert the new IP address, ex. 192.168.7.234; then go to the Default gateway (explained latter) blank and change the setting, ex. 192.168.7.254. Press “Save” to confirm the new setting.

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System
Security
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Motion detection
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Snapshot
View log file
View user information
View parameters
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Software version
Software upgrade

Network

☐ Get IP address automatically
☒ Use fixed IP address

General

IP address 192.168.0.250
Subnet mask 255.255.255.0
Default gateway 192.168.0.254
Primary DNS 192.168.10.1
Secondary DNS 0.0.0.0
Web Server port 80
Save

Advanced

RTSP port 554
MJPEG over HTTP port 8008
Save

When using static IP address to login to the HD Mini-Dome Camera, users can access it either through “DeviceSearch” software (see [Chapter 5. Accessing Camera](#)) or input the IP address in the URL bar and press “Enter”.

File Edit View Favorites Tools Help

Back Forward Stop Home Search Favorites Print

Address 192.168.0.250

General

- **IP address**
This is necessary for network identification.
- **Subnet mask**

It is used to determine if the destination is in the same subnet. The default value is “255.255.255.0”.

- **Default gateway**

This is the gateway used to forward frames to destinations in different subnet. Invalid gateway setting will fail the transmission to destinations in different subnet.

- **Primary DNS (Optional)**

Primary DNS is the primary domain name server that translates hostnames into IP addresses.

- **Secondary DNS (Optional)**

Secondary DNS is a secondary domain name server that backups the primary DNS.

- **Web Server port (Optional)**

The default web server port is 80. Once the port is changed, the user must be notified the change for the connection to be successful. For instance, when the Administrator changes the HTTP port of the IP Camera whose IP address is 192.168.0.100 from 80 to 8080, the user must type in the web browser “http://192.168.0.100:8080” instead of “http://192.168.0.100”.

Advanced

- **RTSP port (Optional)**

RTSP port could be set from 1 to 65535. (Normal Setting Port: 554, 1024 ~65535)

- **MJPEG over HTTP port (Optional)**

The default setting of HTTP Port is 8008; setting range: 1024 ~65535.



NOTE: Be aware to choose the different port from the one set for the web server port.

6.3.4 DDNS

Dynamic Domain Name System (DDNS) allows a host name to be constantly synchronized with a dynamic IP address. In other words, it allows those using a

dynamic IP address to be associated to a static domain name so others can connect to it by name.

The screenshot shows the DVTel web interface. On the left is a vertical menu with items: System, Security, Network, **DDNS** (highlighted with a red box), Mail, FTP, Application, Motion detection, Tampering, Snapshot, View log file, View user information, View parameters, Factory default, Software version, and Software upgrade. The top navigation bar includes Home, System, Streaming, Camera, and Logout. The main content area is titled 'DDNS' and contains the following configuration options:

- Dynamic DNS**
Use Dynamic DNS If You Want To Use Your DDNS Account.
- ☐ Enable DDNS
- Provider: DynDNS.org(Dynamic) (dropdown menu)
- Host name: [text input field]
- Username/E-mail: [text input field]
- Password/Key: [text input field]
- [Save button]

Enable DDNS

Check the item to enable DDNS.

Provider

Select one DDNS host from the provider list.

Host name

Enter the registered domain name in the field.

Username/E-mail

Enter the username or e-mail required by the DDNS provider for authentication.

Password/Key

Enter the password or key required by the DDNS provider for authentication.

6.3.5 Mail

The Administrator can send an e-mail via Simple Mail Transfer Protocol (SMTP) when an alarm is triggered. SMTP is a protocol for sending e-mail messages between servers. SMTP is a relatively simple, text-based protocol, where one or more recipients of a message are specified and the message text is transferred. The configuration page is shown as follows:

The screenshot shows the DVTel web interface. The top navigation bar includes 'Home', 'System', 'Streaming', 'Camera', and 'Logout'. The left sidebar contains a menu with the following items: System, Security, Network, DDNS, Mail (highlighted with a red box), FTP, Application, Motion detection, Tampering, Snapshot, View log file, View user information, View parameters, Factory default, Software version, and Software upgrade. The main content area is titled 'Mail' and 'SMTP'. It contains two sets of configuration fields for SMTP servers. The first set includes fields for '1st SMTP (mail) server', '1st SMTP (mail) server port' (set to 25), '1st SMTP account name', '1st SMTP password', and '1st recipient email address'. The second set includes fields for '2nd SMTP (mail) server', '2nd SMTP (mail) server port' (set to 25), '2nd SMTP account name', '2nd SMTP password', and '2nd recipient email address'. A 'Sender email address' field is at the bottom. A 'Save' button is located below the 'Sender email address' field.

Two sets of SMTP can be configured. Each set includes SMTP Server, Account Name, Password and E-mail Address settings. For SMTP server, contact your network service provider for more specific information.

6.3.6 FTP

The Administrator can set as sending alarm message to a specific File Transfer Protocol (FTP) site when an alarm is triggered. Users can assign alarm message to up to two FTP sites. The FTP setting page is shown below. Enter the FTP details, which include server, server port, user name, password and remote folder, in the fields. Press “Save” when finished.

DVTel

HomeSystemStreamingCameraLogout

System

Security

Network

DDNS

Mail

FTP

Application

Motion detection

Tampering

Snapshot

View log file

View user information

View parameters

Factory default

Software version

Software upgrade

FTP

FTP

Built-in FTP server port21

1st FTP server

1st FTP server port21

1st FTP user name

1st FTP password

1st FTP remote folder

☐ 1st FTP passive mode

2nd FTP server

2nd FTP server port21

2nd FTP user name

2nd FTP password

2nd FTP remote folder

☐ 2nd FTP passive mode

Save

6.3.7 Application

The IP Camera (HD Classic Fixed Camera and HD Classic Mini-Dome Camera) is equipped with one alarm input and one relay output for use with alarms to capture event images. Refer to [2.2 Camera's Connectors](#) to connect alarm devices to the HD Mini-Dome Camera if needed. The alarm configuration page is also shown below.

The screenshot shows the DVTel web interface. The top navigation bar includes 'Home', 'System', 'Streaming', 'Camera', and 'Logout'. The left sidebar lists various system settings, with 'Application' highlighted by a red rectangle. The main content area is titled 'Application' and contains the following sections:

- Alarm Switch**: Radio buttons for 'Off' (selected) and 'On'.
- Alarm Type**: Radio buttons for 'Normal close' and 'Normal open' (selected).
- Alarm Output**: Radio buttons for 'Output high' (selected) and 'Output low'.
- Triggered Action**:
 - ☒ Enable alarm output
 - ☐ Send message by FTP
 - ☐ Send message by E-Mail
 - ☐ Upload image by FTP
 - ☐ Upload image by E-Mail
- File Name**:
 - File name :
 - ☒ Add date/time suffix
 - ☐ Add sequence number suffix (no maximum value)
 - ☐ Add sequence number suffix up to and then start over
 - ☐ Overwrite

A 'Save' button is located at the bottom of the configuration area.

Alarm Switch

The Administrator can enable or disable the alarm function.

Alarm Type

Select an alarm type, “Normal close” or “Normal open,” that corresponds with the alarm application.

Alarm Output

Define alarm output signal “high” or “low” as the normal alarm output status according to the current alarm application.

Action (Multi-option)

The Administrator can specify alarm actions that will take when the alarm is triggered. All options are listed as follows:

- **Enable Alarm Output**

Select the item to enable the alarm relay output.

- **Send Alarm Message by FTP/E-Mail**

The Administrator can select whether to send an alarm message by FTP and/or E-Mail when an alarm is triggered.

- **Upload Image by FTP**

Select this item and the Administrator can assign a FTP site and configure various parameters as shown in the figure below. When the alarm is triggered, event images will be uploaded to the appointed FTP site.

The screenshot shows the DVTel web interface with the 'Application' tab selected. The left sidebar contains a menu with options like System, Security, Network, DDNS, Mail, FTP, Application, Motion detection, Tampering, Snapshot, View log file, View user information, View parameters, Factory default, Software version, and Software upgrade. The main content area is titled 'Application' and contains several sections: 'Alarm Switch' (On), 'Alarm Type' (Normal open), 'Alarm Output' (Output high), and 'Triggered Action'. The 'Triggered Action' section has four checkboxes: 'Enable alarm output' (checked), 'Send message by FTP' (unchecked), 'Send message by E-Mail' (unchecked), and 'Upload image by FTP' (checked). The 'Upload image by FTP' section is highlighted with a red box and contains the following fields: 'FTP address' (FTP1), 'Pre-trigger buffer' (5 frames), 'Post-trigger buffer' (5 frames), 'Continue image upload' (unchecked), 'Upload for' (1 sec), 'Upload during the trigger active' (unchecked), and 'Image frequency' (Max. fps). Below this section is the 'File Name' section with a 'File name' field (image.jpg), four radio buttons for naming conventions (Add date/time suffix, Add sequence number suffix, Add sequence number suffix up to 0 and then start over, Overwrite), and a 'Save' button.

- **Upload Image by E-Mail**

Select this item, and the Administrator can assign an e-mail address and configure various parameters as shown in the figure below. When the alarm is triggered, event images will be sent to the configured e-mail address.

The screenshot shows the DVTEL web interface with the 'Application' tab selected. The left sidebar contains a menu with items like System, Security, Network, DDNS, Mail, FTP, Application, Motion detection, Tampering, Snapshot, View log file, View user information, View parameters, Factory default, Software version, and Software upgrade. The main content area is titled 'Application' and contains several sections: 'Alarm Switch' (Off/On), 'Alarm Type' (Normal close/Normal open), 'Alarm Output' (Output high/Output low), and 'Triggered Action'. Under 'Triggered Action', there are checkboxes for 'Enable alarm output', 'Send message by FTP', 'Send message by E-Mail', and 'Upload image by FTP'. The 'Upload image by E-Mail' option is checked and highlighted with a red box. Below this, there are fields for 'E-Mail address' (set to 'E-Mail 1'), 'Pre-trigger buffer' (5 frames), and 'Post-trigger buffer' (5 frames). There is also a checkbox for 'Continue image upload' and two radio buttons for 'Upload for 1 sec' (selected) and 'Upload during the trigger active'. The 'Image frequency' is set to 'Max. fps'. At the bottom, the 'File Name' section shows 'File name : image.jpg' and options for adding date/time suffix, sequence number suffix, or overwriting. A 'Save' button is at the bottom.



NOTE: Make sure SMTP or FTP configuration has been completed. See section [6.3.5 Mail](#) and [6.3.6 FTP](#) for further details.

File Name

Enter a file name in the blank, ex. image.jpg. The uploaded image's file name format can be set in this section. Please select the one that meets your requirements.

- **Add date/time suffix**

File name: imageYYMMDD_HHNNSS_XX.jpg

Y: Year, M: Month, D: Day

H: Hour, N: Minute, S: Second

X: Sequence Number

- **Add sequence number suffix (no maximum value)**

File name: imageXXXXXXXX.jpg

X: Sequence Number

- **Add sequence number suffix (limited value)**

File Name: imageXX.jpg

X: Sequence Number

The file name suffix will end at the number being set. For example, if the setting is up to “10,” the file name will start from 00, end at 10, and then start all over again.

- **Overwrite**

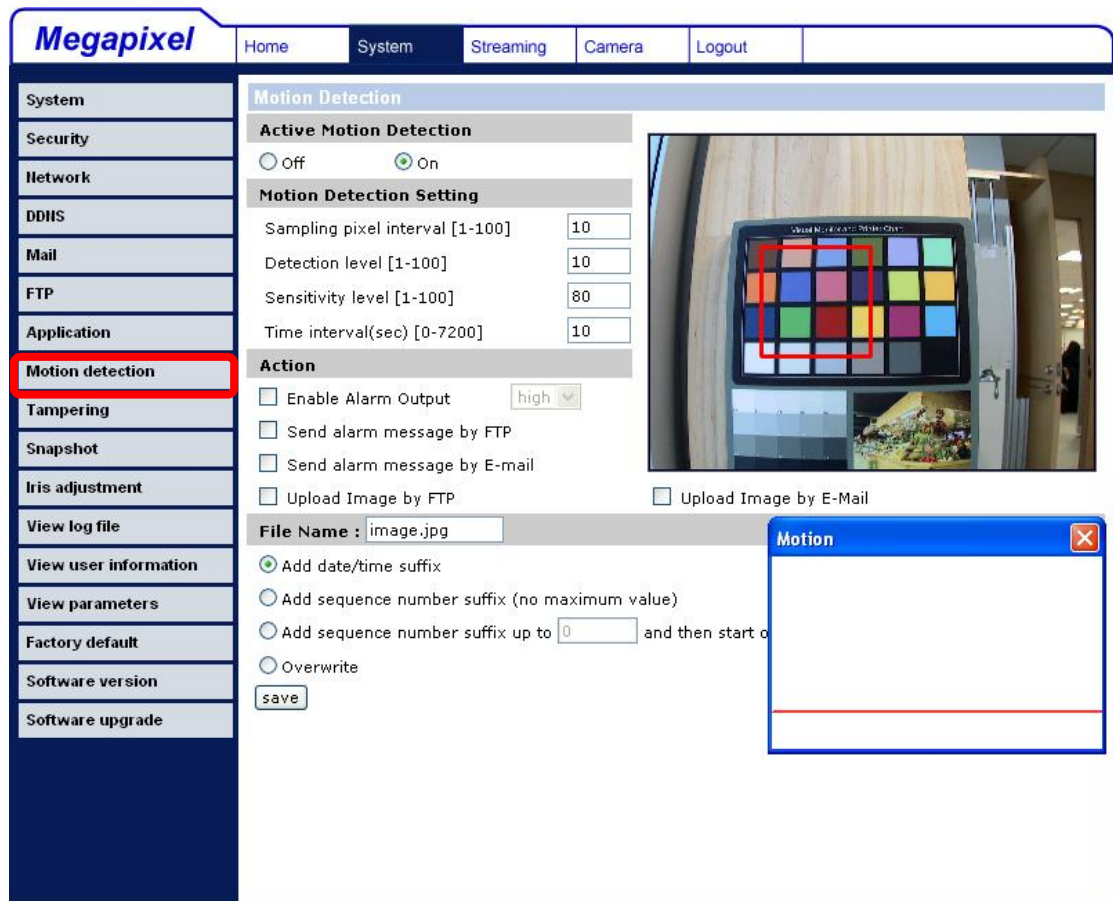
The original image in the FTP site will be overwritten by the new uploaded file with a static filename.

Save

After completing all the settings mentioned above, please click on the Save button to save all the settings in this page.

6.3.8 Motion Detection

Motion Detection function allows detecting suspicious motion and triggering alarms when the motion level in the detected area reaches/exceeds the determined sensitivity threshold value.



In the Motion Detection settings page, there is a red frame right on the displayed image and a motion indication window shown just below the image; see the figure shown above. The red frame is for defining the motion detection area. To change the size of the area, move the mouse cursor to the edge of the red frame and draw it outward/inward. Move the mouse to the center of the red frame to shift the frame to the intended location. As for the motion indication window, when motion is detected, signals will be shown there.

Detailed settings of Motion Detection are described as follows:

Active Motion Detection

This setting permits the Motion Detection function to be turn on or off. Default setting is Off.

Motion Detection Setting

Users can adjust various parameters of Motion Detection in this section.

- Sampling pixel interval [1-100]:
The default value is 10, which means system will take one sampling pixel for every 10 pixels.

- **Detection level [1-100]:**
The default level is 10. The value is to set detection level for each sampling pixel; the smaller the value, the more sensitive it is.
- **Sensitivity level [1-100]:**
The default level is 80, which means if only 20% or more sampling pixels are detected with motion, system will detect the motion. The larger the value, the more sensitive it is. Meanwhile, when the value is bigger, the red horizontal line in the motion indication window will be lower accordingly.
- **Time interval (sec) [0-7200]:**
The default interval is 10. The value is the minimum inactive interval between each detected motion to prevent multiple alarms from the same motion event.

Action (Multi-option)

The Administrator can specify alarm actions that will be taken when motion is detected. All options are listed as follows:

- **Enable Alarm Output**
Check the item and select the predefined type of alarm output to enable alarm relay output when motion is detected.
- **Send Alarm Message by FTP/E-Mail**
The Administrator can select whether to send an alarm message by FTP and/or E-Mail when motion is detected.
- **Upload Image by FTP**
Select this item, and the Administrator can assign an FTP site and configure various parameters as shown in the figure below. When motion is detected, event images will be uploaded to the appointed FTP site.

☒ Upload Image by FTP

FTP address: FTP1

Pre-trigger buffer: 5 frames

Post-trigger buffer: 5 frames

☐ Continue image upload

☒ Upload for 1 sec

☐ Upload during the trigger active

Image frequency: Max. fps

- **Upload Image by E-Mail**

Select this item, and the Administrator can assign an e-mail address and configure various parameters as shown in the figure below. When motion is detected, event images will be sent to the appointed e-mail address.

☒ Upload Image by E-Mail
E-Mail address: E-Mail 1
Pre-trigger buffer: 5 frames
Post-trigger buffer: 5 frames
☐ Continue image upload
☒ Upload for 1 sec
☐ Upload during the trigger active
Image frequency: Max. fps



NOTE: Make sure SMTP or FTP configuration has been completed. See section [4.3.5 Mail](#) and [4.3.6 FTP](#) for further details.

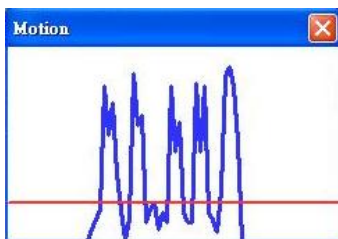
File Name

The uploaded image's filename format can be set in this section. Please select one that meets your requirements.

Save

Click the Save button to save all the Motion Detection settings mentioned above.

The figure below shows how it is displayed when motion is detected.



6.3.9 Snapshot

The HD Mini-Dome Camera supports a JPEG snapshot function. Users can specify a storage location for the snapshots. The default setting is: C:\. Once set, press “Save,” and all the snapshots will be saved in the designate location.



NOTE: Make sure the selected file path is valid.

The screenshot displays the DVTel web interface. On the left is a vertical navigation menu with the following items: System, Security, Network, DDNS, Mail, FTP, Application, Motion detection, Tampering, Snapshot (highlighted with a red box), View log file, View user information, View parameters, Factory default, Software version, and Software upgrade. The top navigation bar includes links for Home, System, Streaming, Camera, and Logout. The main content area is titled 'Snapshot' and contains the text 'All images stored at:' followed by a text input field containing 'C:\' and a 'Select' button. Below this, a 'Save' button is highlighted with a red box.

6.3.10 View Log File

Click on the link to view the system log file. The content of the file provides useful information about configuration and connections after system boot-up.

The screenshot displays the DVTel web interface. On the left is a vertical menu with various system management options. The 'View log file' option is highlighted with a red rectangular border. The main content area on the right is titled 'System log' and contains a scrollable text box showing system boot logs and connection records.

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System log

```
[Sat Apr 4 10:25:13 2009] --Network interface initialized start
[Sat Apr 4 10:26:08 2009] --Network interface initialized end
[Sat Apr 4 10:26:08 2009] --Host IP = 1500
[Sat Apr 4 10:26:08 2009] --Subnet Mask = 0
[Sat Apr 4 10:26:08 2009] --Gateway = 192.168.0.254
[Sat Apr 4 10:26:08 2009] --MAC address = 00:D0:89:02:B9:C8
[Mon Apr 6 18:38:13 2009] --connect by Admin@192.168.7.70
[Tue Apr 7 14:13:40 2009] --connect by Admin@192.168.7.199
[Wed Apr 8 10:26:04 2009] --connect by Admin @192.168.7.199
[Wed Apr 8 10:26:07 2009] --connect by Admin @192.168.7.199
[Wed Apr 8 10:26:11 2009] --connect by Admin @192.168.7.199
[Wed Apr 8 10:26:24 2009] --connect by Admin @192.168.7.199
[Wed Apr 8 10:26:29 2009] --connect by Admin @192.168.7.199
[Wed Apr 8 10:26:48 2009] --connect by Admin@192.168.7.199
[Wed Apr 8 15:43:41 2009] --connect by Admin@192.168.7.70
[Thu Apr 9 14:16:04 2009] --connect by Admin@192.168.7.199
[Thu Apr 9 14:37:12 2009] --connect by @192.168.7.154
[Thu Apr 9 14:37:15 2009] --connect by Admin@192.168.7.154
```

System
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Tampering
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View user information
View parameters
Factory default
Software version
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6.3.11 View User Information

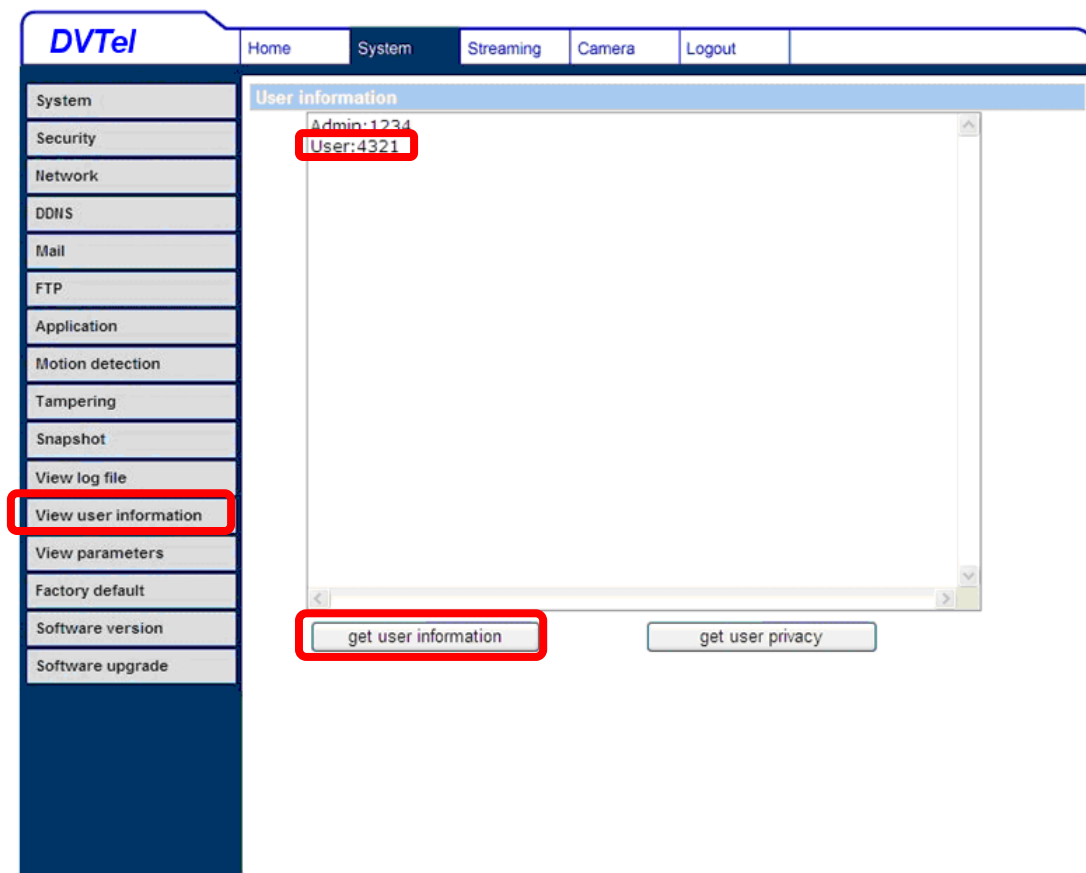
The Administrator can view each added user's login information and privileges (see [6.3.2 Security](#)).

View User Login Information

All the users in the network will be listed in the "User information" zone, as shown below. As the figure below shows:

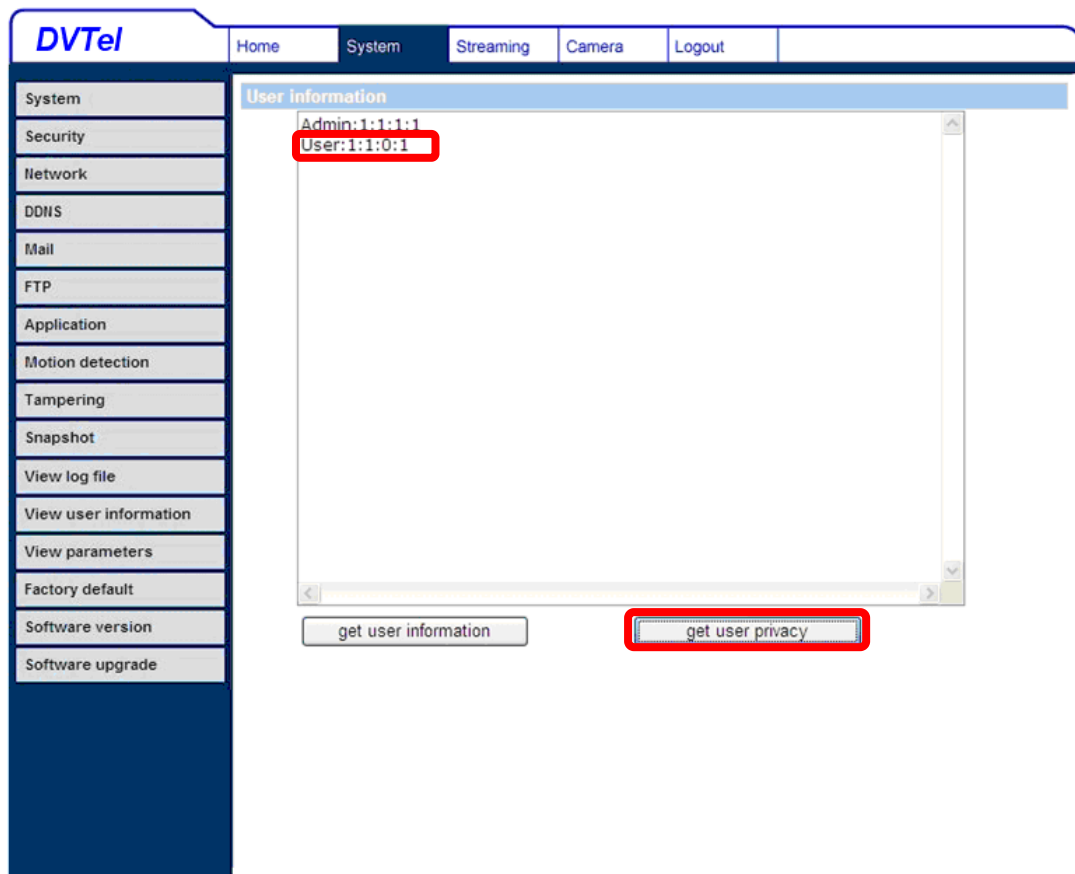
User: 4321

It indicates that one user's login username is: User, and the password is: 4321.



View User Privileges

Press "get user privacy" at the bottom of the page, and the Administrator can view each user's privileges.



As the figure above shows:

User: 1:1:0:1

For each privilege there is either a “0” meaning the user has no privilege or a “1” meaning they have that privilege.

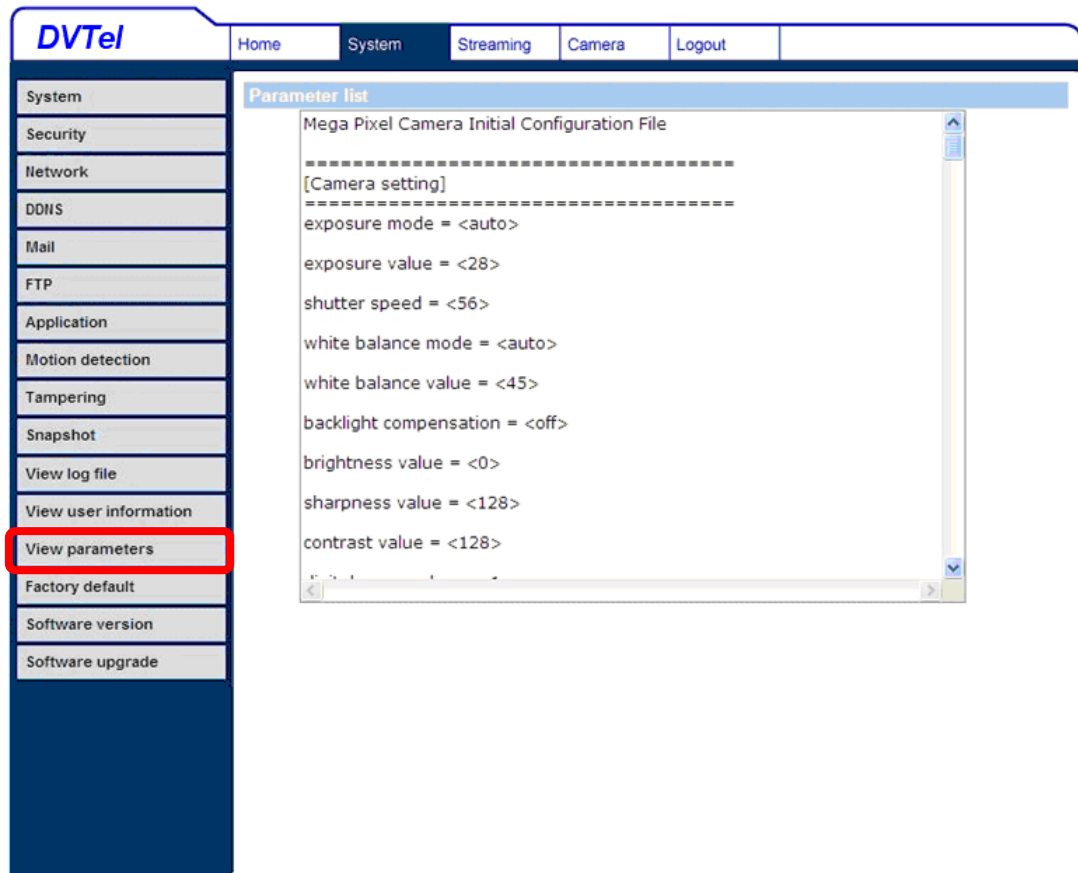
Example: 1:1:0:1 = I/O access : Camera control : Talk : Listen (see [6.3.2 Security](#))

☒ I/O access	☒ Camera control
☐ Talk	☒ Listen

Therefore, it denotes the user is granted privileges of I/O access, Camera control and Listen.

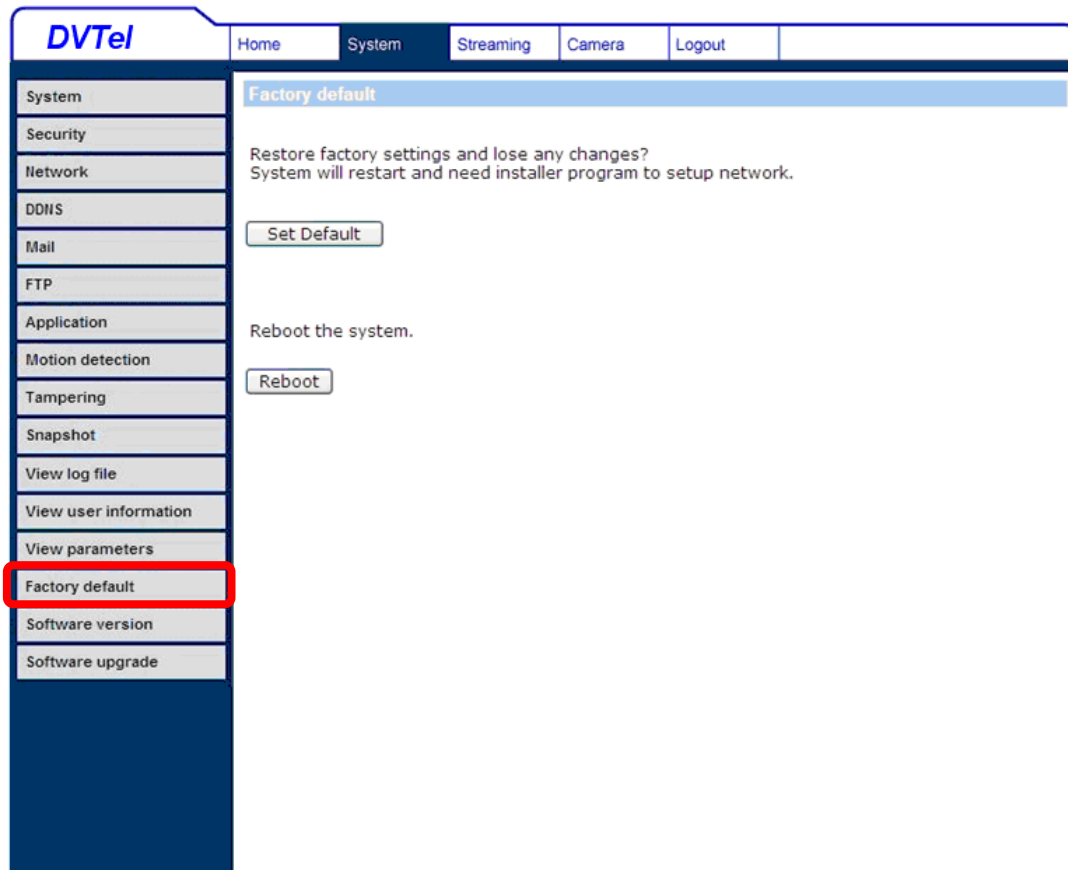
6.3.12 View Parameters

Click on this item to view the entire system's parameter settings.



6.3.13 Factory Default

The factory default setting page is shown as below. Follow the instructions to reset the HD Mini-Dome Camera to factory default setting if needed.



Set Default

Click on the “Set Default” button to recall the factory default settings. Then the camera will restart in 30 seconds.



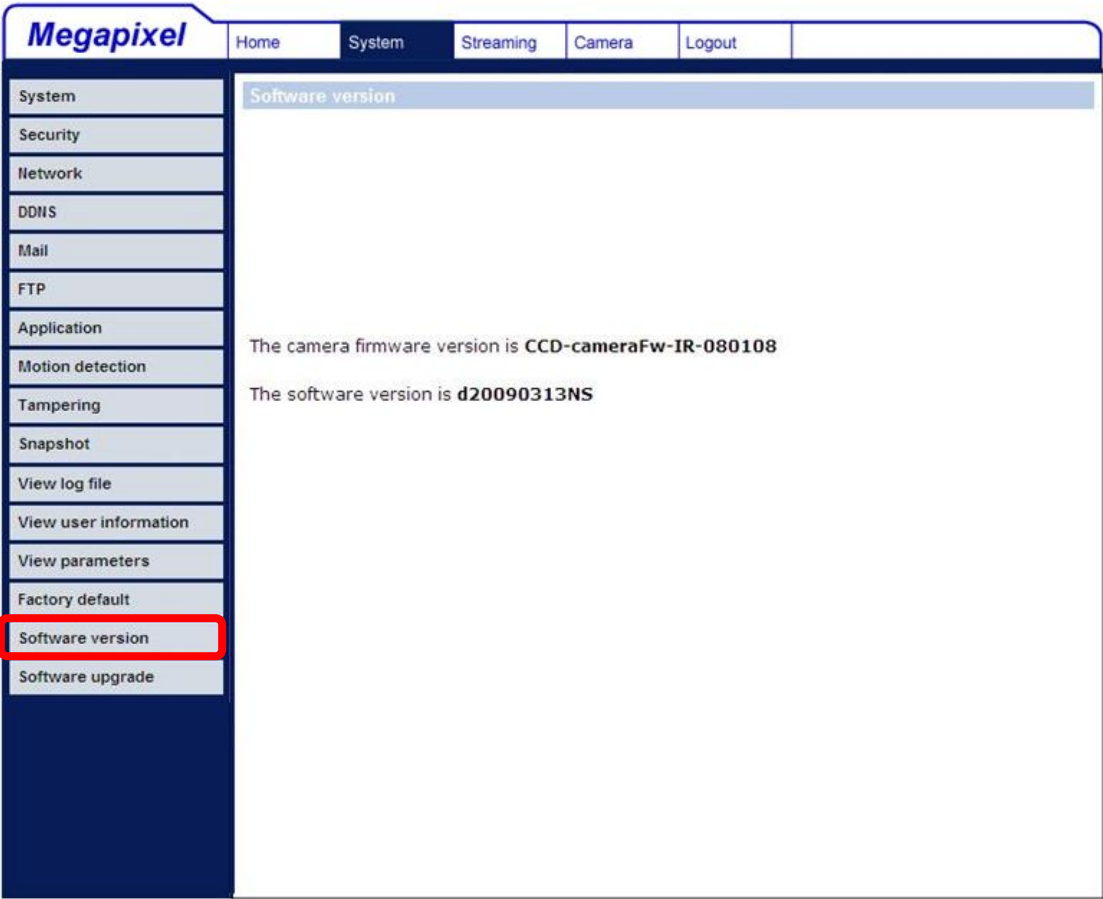
NOTE: The IP address will be restored to default which will disconnect the web-page. Use the Device Search utility to rediscover and set the IP parameters for the camera

Reboot

Click on the “Reboot” button, and the camera will restart without changing current settings.

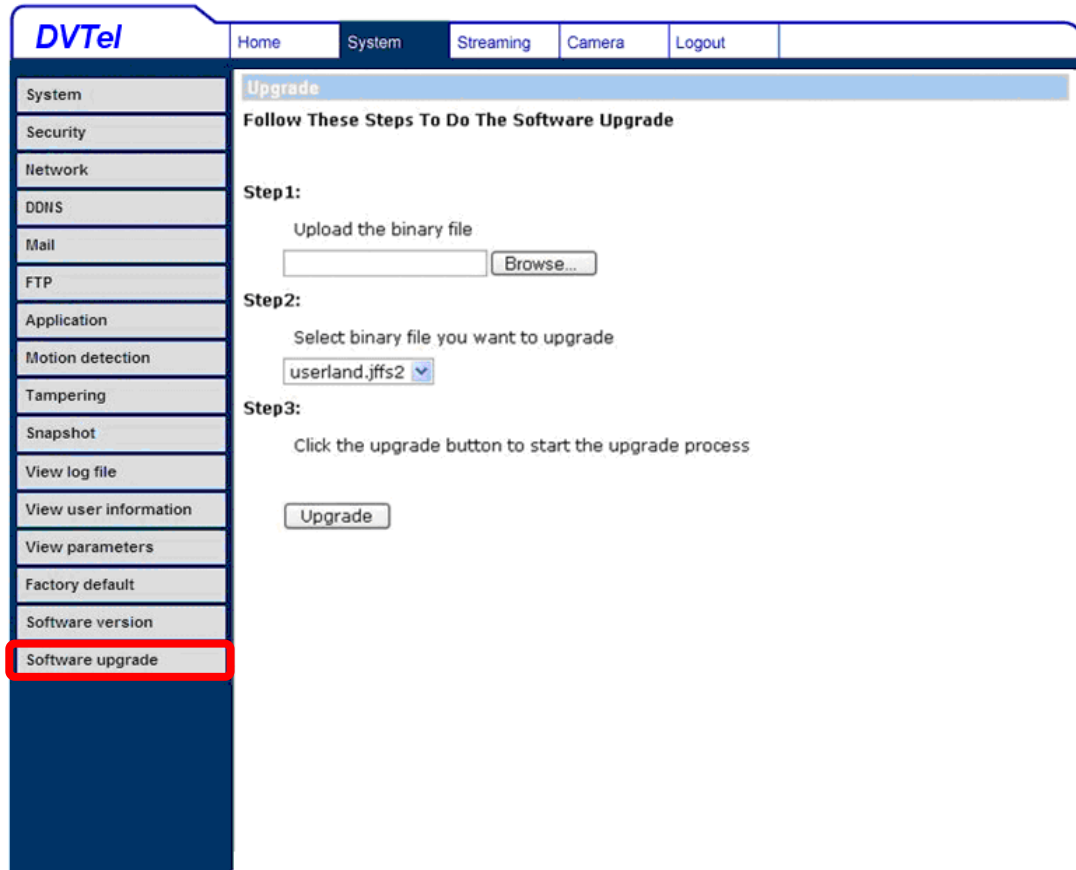
6.3.14 Software Version

The current software version is displayed in the software version page, which is shown as the figure below.



6.3.15 Software Upgrade

Software upgrade can be carried out in the “Software Upgrade” page, as shown below.



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Upgrade

Follow These Steps To Do The Software Upgrade

Step1:
Upload the binary file

Step2:
Select binary file you want to upgrade
userland.jffs2

Step3:
Click the upgrade button to start the upgrade process

System
Security
Network
DDNS
Mail
FTP
Application
Motion detection
Tampering
Snapshot
View log file
View user information
View parameters
Factory default
Software version
Software upgrade



NOTE: Make sure the upgrade software file is available before carrying out software upgrade.

The upgrade procedure is as follows:

Step 1: Click “Browse” and select the binary file to be uploaded, ex. Userland.jffs2.

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FTP
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Motion detection
Tampering
Snapshot
View log file
View user information
View parameters
Factory default
Software version
Software upgrade

Upgrade

Follow These Steps To Do The Software Upgrade

Step1:
Upload the binary file
C:\userland\userland.jffs2 **Browse...**

Step2:
Select binary file you want to upgrade
userland.jffs2

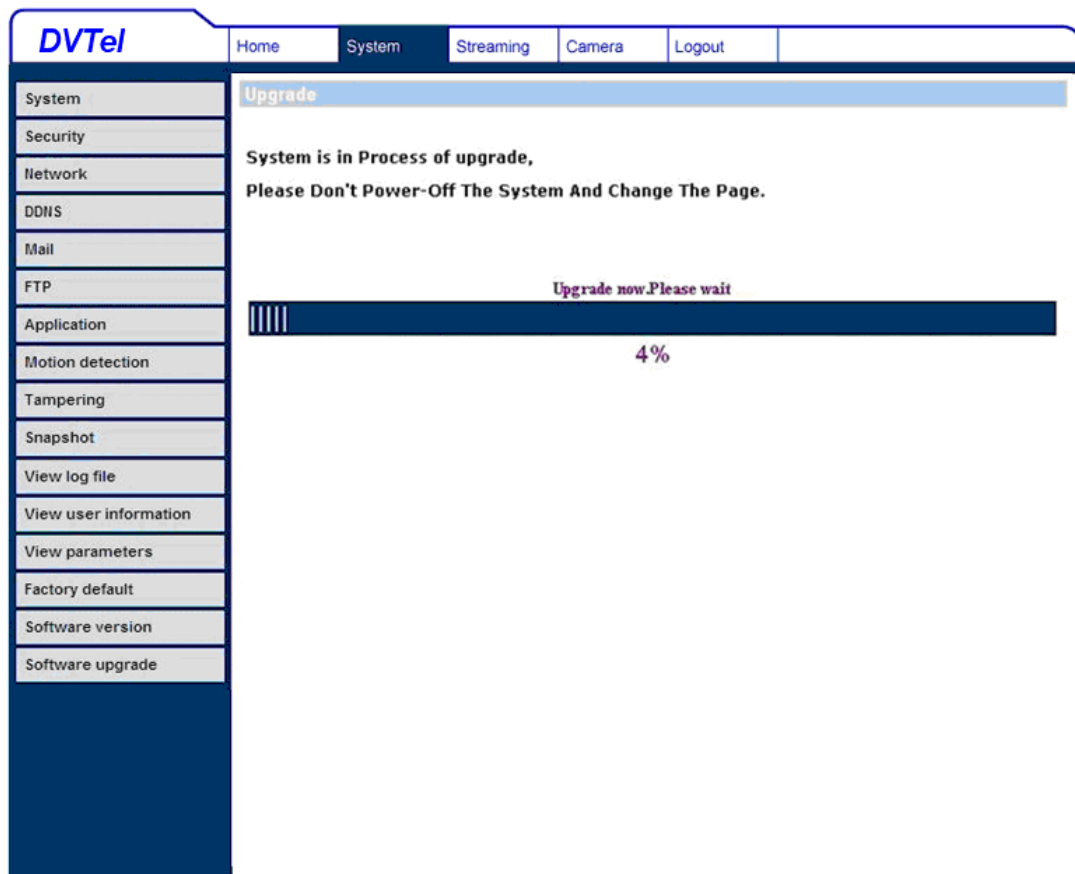
Step3:
Click the upgrade button to start the upgrade process
Upgrade



NOTE: Do not change the upgrade file name, or the system will fail to find the file.

Step 2: Pull down the upgrade binary file list and select the file you want to upgrade; in this case, select “userland.jffs2.”

Step 3: Press “Upgrade”. The system will first check whether the upgrade file exists or not, and then begin to upload the upgrade file. Subsequently, the upgrade status bar will display on the page. When it runs to 100%, the upgrade process is finished.



After the upgrade process is finished, the viewer will return to Home page.

If the web page or video does not display properly after the software upgrade, it is possible that the DC Viewer also needs to be upgraded. This will happen automatically if the old version has been removed before the camera web page is opened. To remove the DC Viewer:

Step 4: Close the video browser.

Step 5: Click “Control Panel”, and then double click “Add or Remove Programs.” In the “Currently install programs” list, select “DCViewer” and click the button “Remove” to uninstall the existing DC Viewer.

Step 6: Open a new web browser, re-login the IP Camera, and then allow the automatic download of DC Viewer.

6.4 Video and Audio Streaming Settings

Press the tab “Streaming” in the top of the page and the configurable video and audio items will display in the left column. In Streaming, the Administrator can

configure specific video resolution, video compression mode, video protocol, audio transmission mode, etc. Further details of these settings will be specified in the following sections.

6.4.1 Video Resolution and Rotate Type

The video setting page is shown below:

The screenshot shows the DVTeL web interface. The top navigation bar includes 'Home', 'System', 'Streaming', 'Camera', and 'Logout'. The left sidebar contains a menu with 'Video Format' highlighted in red, along with 'Video Compression', 'Video OCX Protocol', 'Video Frame Skip', 'Video Mask', and 'Audio'. The main content area is titled 'Video Format' and contains two sections. The 'Video Format' section has a dropdown menu set to 'MJPEG + H.264', followed by 'MJPEG format' and 'H.264 format' dropdowns, both set to '1280 x 720 (30fps)', and a 'Save' button. The 'Video Rotate Type' section has four radio button options: 'Normal video' (selected), 'Flip video', 'Mirror video', and '180 degree rotate', with a 'Save' button below them.

Video Resolution

The IP Camera provides various video dual streaming formats like the following:

- MJPEG + H.264
- MJPEG + MPEG-4
- MJPEG + BNC

Note: Other combinations may be shown with upgraded SW.

Resolution for MJPEG & H.264 format includes:

- Highest: 1280 x 960 (12/15fps)
- HD 720p: 1280 × 720 (25/30fps)
- D1: 720 × 480 (25/30fps)
- VGA: 640 × 480 (25/30fps)

- QVGA: 320 × 240 (25/30fps)
- CIF: 352 × 240 (25/30fps)
- QCIF: 176 × 144 (25/30fps)

Click “Save” to confirm the setting.

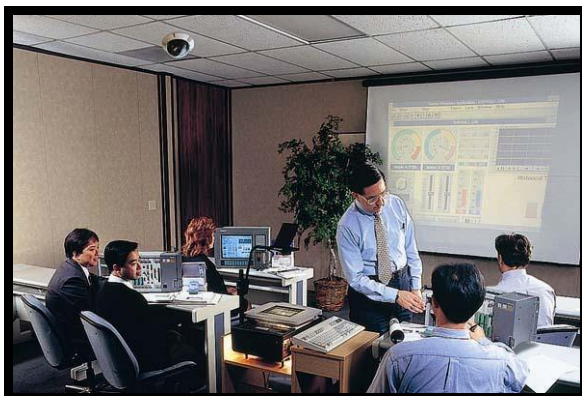
Video Rotate Type

Users can change video display type if necessary. Selectable video rotate types include Normal, Flip, Mirror and 180 degree. Differences among these types are illustrated as below.

Suppose the displayed image of HD Mini-Dome Camera is shown upside down as the figure below.



To rotate the image, users can select “180 Degree” and the displayed image will be rotated as shown below.



The following is descriptions for different video rotate type.

- **Flip**
If select <Flip>, the image will be flipped vertically, but not left to right.
- **Mirror**
If select <Mirror>, the image will be flipped horizontally.
- **180 Degree**
Selecting <180 Degree> will correct for an upside down image.

Click “Save” to confirm the setting.

6.4.2 Video Compression

Users can select a proper MJPEG/H.264/MPEG-4 compression mode in the video compression page (see the figure below), depending on the application.

Users can also decide whether to display compression information on the Home page.

Click “Save” to confirm the setting.

6.4.3 Video OCX Protocol

In the Video OCX protocol setting page, users can select RTP over UDP, RTP over TCP, RTSP over HTTP or MJPEG over HTTP, for streaming media over the network. In the case of multicast networking, users can select the Multicast mode. The page is shown as follows.

Video OCX protocol setting options include:

- RTP over UDP / RTP over RTSP(TCP) / RTSP over HTTP / MJPEG over HTTP
Select a mode according to your data delivery requirements.
- Multicast Mode
Enter all required data, including multicast IP address, MPEG-4 video port, H.264 video port, MJPEG video port, audio port and TTL into each blank.

Click “Save” to confirm the setting.

6.4.4 Video Frame Skip

Video frame skipping is for reducing bandwidth and storage if necessary by reducing the camera frame-rate. The setting page is shown as below.

The screenshot shows the DVTel web interface. At the top, there is a navigation bar with the DVTel logo and links for Home, System, Streaming, Camera, and Logout. On the left side, there is a vertical menu with options: Video Format, Video Compression, Video OCX Protocol, Video Frame Skip (highlighted with a red box), Video Mask, and Audio. The main content area is titled 'Video Frame Skip' and contains two sections: 'MJPEG Frame Skip' and 'MPEG-4 Frame Skip'. Each section has four radio button options: 'No skipping, default' (selected), 'Frame skipping at 5 frame internal', 'Frame skipping at 10 frame internal', and 'Frame skipping at 15 frame internal'. Below each set of options is a 'Save' button.

DVTel Home System Streaming Camera Logout

Video Frame Skip

MJPEG Frame Skip :

- ☒ No skipping, default
- ☐ Frame skipping at 5 frame internal
- ☐ Frame skipping at 10 frame internal
- ☐ Frame skipping at 15 frame internal

Save

MPEG-4 Frame Skip :

- ☒ No skipping, default
- ☐ Frame skipping at 5 frame internal
- ☐ Frame skipping at 10 frame internal
- ☐ Frame skipping at 15 frame internal

Save

DVTel

HomeSystemStreamingCameraLogout

Video FormatVideo CompressionVideo OCX ProtocolVideo Frame SkipVideo MaskAudio

Video Frame Skip

MJPEG Frame Skip :

☒ No skipping, default

☐ Frame skipping at 2 frame internal

☐ Frame skipping at 5 frame internal

☐ Frame skipping to 1 frame

Save

H.264 Frame Skip :

☒ No skipping, default

☐ Frame skipping at 2 frame internal

☐ Frame skipping at 5 frame internal

☐ Frame skipping to 1 frame

Save

MPEG-4 Frame Skip :

☒ No skipping, default

☐ Frame skipping at 2 frame internal

☐ Frame skipping at 5 frame internal

☐ Frame skipping to 1 frame

Save

MJPEG/H.264/MPEG-4 Frame Skip options include:

- No skipping, default
- Frame skipping at 2 frame internal (15 fps)
- Frame skipping at 5 frame internal (6 fps)
- Frame skipping to 1 frame (1 fps)

NOTE: Higher frame skipping rate will decrease video smoothness.

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6.4.5 Audio Mode and Bit Rate Settings

The audio setting page is shown as below. In the Audio page, the Administrator can select one transmission mode and audio bit rate.

The screenshot shows the DVTel web interface. The top navigation bar includes links for Home, System, Streaming, Camera, and Logout. The left sidebar menu lists various settings: Video Format, Video Compression, Video OCX Protocol, Video Frame Skip, Video Mask, and Audio (which is highlighted with a red border). The main content area is titled 'Audio'. Under 'Transmission Mode', there are five radio button options: 'Full-duplex (Talk and listen simultaneously)', 'Half-duplex (Talk or listen, not at the same time)', 'Simplex (Talk only)', 'Simplex (Listen only)' (which is selected), and 'Disable'. Below the radio buttons, there is a 'Bit Rate' label followed by a dropdown menu currently showing 'uLAW'. At the bottom of the settings area is a 'Save' button.

Transmission Mode

- **Full-duplex (Talk and Listen simultaneously)**
In the Full-duplex mode, the local and remote sites can communicate with each other simultaneously, i.e. both sites can speak and be heard at the same time.
- **Half-duplex (Talk or Listen, not at the same time)**
In the Half-duplex mode, the local/remote site can only talk or listen to the other site at a time.
- **Simplex (Talk only)**
In the Talk only Simplex mode, the local/remote site can only talk to the other site.
- **Simplex (Listen only)**

In the Listen only Simplex mode, the local/remote site can only listen to the other site.

- **Disable**

Select the item to turn off the audio transmission function.

Bit Rate

Selectable audio transmission bit rate include 16 kbps (G.726), 24 kbps (G.726), 32 kbps (G.726), 40 kbps (G.726), uLAW (G.711) and ALAW (G.711). Both uLAW and ALAW signify 64 kbps but in different compression formats. Higher bit rates will support higher audio quality and require more bandwidth.

Click “Save” to confirm the setting.

6.5 Camera Settings

The figure below is the camera configuration page. Details of each parameter setting are described as follows.

DVTel Home System Streaming Camera Logout

Exposure
White Balance
Backlight off SET
Brightness 1 SET
Sharpness 6 SET
Contrast 6 SET
Digital Zoom x1 SET
IR function Auto SET
WDR function Off SET
3DNR function Off SET
TV System 30 fps(NTSC) SET

2007/01/05 00:41

Video format ☒ MJPEG ☐ H.264
x1 x 1/2 Full talk

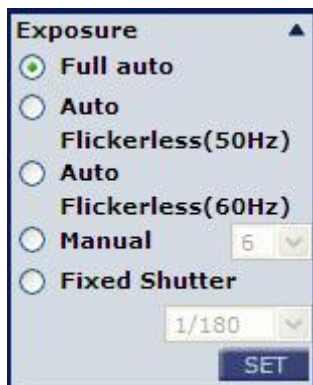
MJPEG bitrate : middle compression , middle quality
H.264 bitrate : low compression , high quality



NOTE: Camera settings and buttons below the screen vary among different types of cameras.

6.5.1 Exposure Setting

The Exposure pull-down menu is shown as follows:



Exposure is the amount of light received by the image sensor and is determined by the iris setting, and the shutter speed. With this item, users can define how the Auto Exposure function works.

Each exposure mode is specified as follows:

Full Auto Mode

In this mode, the camera's Shutter Speed, IRIS and AGC (Auto Gain Control) control circuits work together automatically to get consistent video output level.

Auto Flickerless (50Hz)/(60Hz) Mode

Television scanning (PAL & NTSC) and power supply systems (AC 50 & 60 Hz) are not the same in different countries and regions. When these differ, users may detect a flickering situation displayed on the screens because the lighting and the cameras are working under different frequency systems. In this case using the Auto Flickerless function could reduce the symptom.

Manual Mode

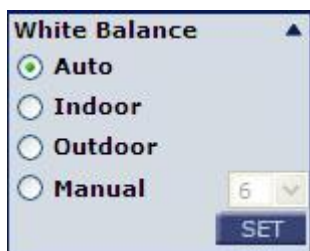
In this mode, users can select a number between 1 and 15; bigger numbers mean slower shutter. After changing the setting, press <SET> to confirm the new setting.

Fixed Shutter Mode

In this mode, a fixed shutter speed can be selected from the dropdown menu. The shutter speed range is from 1 to 1/10000 sec. with 16 options.

6.5.2 White Balance Setting

The White Balance pull-down menu is shown as follows:



In order to reproduce accurate colors under a wide range of lighting types the camera needs to find a reference color temperature for calculating all the other colors. The unit for measuring this lighting color is in degrees Kelvin (K). Users can select one of the White Balance Control modes according to the operating environment. The following table shows the color temperature of some light sources for reference.

Light Sources	Color Temperature in K
Cloudy Sky	6,000 to 8,000
Noon Sun and Clear Sky	6,500
Household Lighting	2,500 to 3,000
75-watt Bulb	2,820
Candle Flame	1,200 to 1,500

Auto Mode

In this mode, white balance works automatically to produce the most natural colors under most lighting conditions.

Indoor/outdoor Mode

Select for indoor or outdoor mode.

Manual Mode

In this mode, users can change the White Balance value manually. Users can select a number between 1 ~ 11, and press <SET> to confirm the new setting.

6.5.3 Backlight Setting



Based on various lighting situations, users could select to turn on or off the function of backlight compensation to optimize the video quality. The default value of Backlight is Off.

6.5.4 Brightness Setting



Users can adjust the image's brightness by adjusting the item. To increase video brightness, select a bigger number. Press <SET> to confirm the new setting.

6.5.5 Sharpness Setting



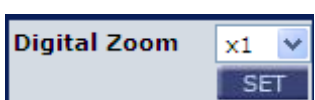
Increasing the sharpness level can make the image looked sharper; especially enhance the object's edges. Press <SET> to confirm the new setting.

6.5.6 Contrast Setting



Camera image contrast level is adjustable; please select ranging from 1 to 11.

6.5.7 Digital Zoom Setting



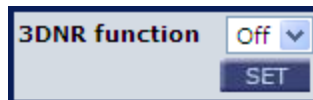
The camera's digital zoom is adjustable from x1 to x16. Press <SET> to confirm the new setting.

6.5.8 WDR Function



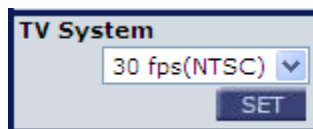
The Wide Dynamic Range (WDR) function is for solving high contrast or changing light issues so that enhances better video display. Press <SET> to confirm the new setting. The Default setting is ON and set to level 1.

6.5.9 3DNR Function



With 3D Noise Reduction (3DNR) function, the IP Camera can deliver more clear images in low-light conditions. The Default is ON.

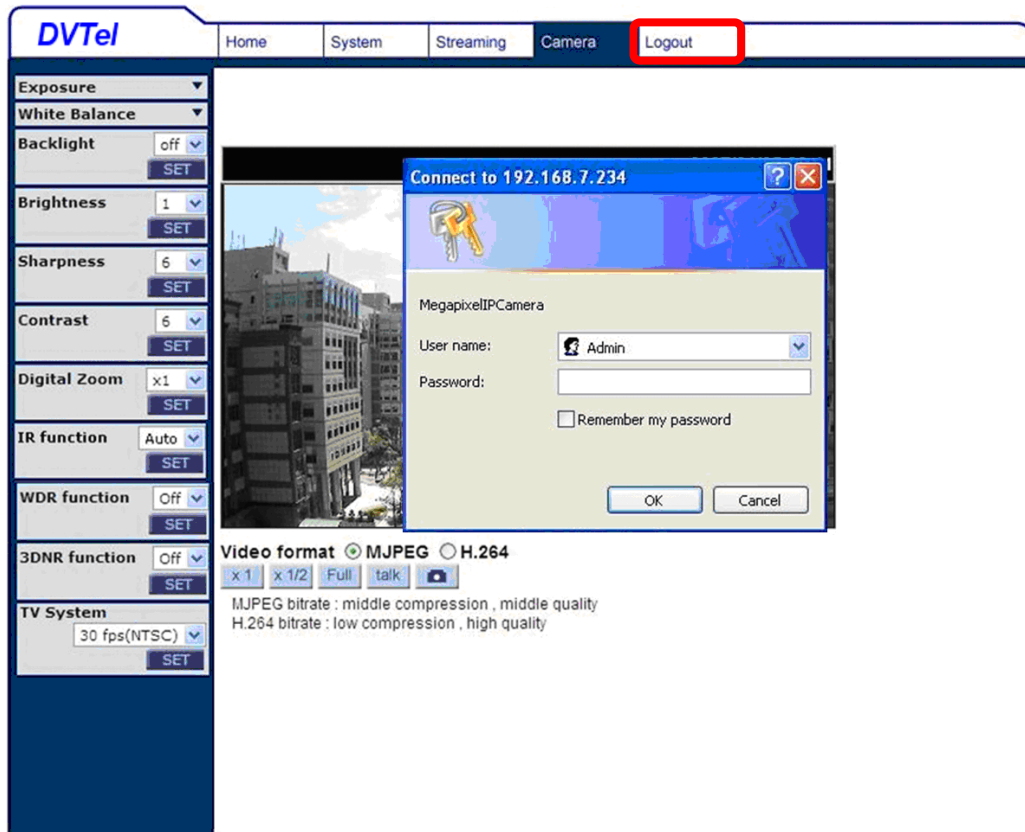
6.5.10 TV System Setup



Select the video format that matches the present TV system.

6.6 Logout

Press the tab “Logout” in the top of the page, and the login window will pop up. This enables login with another user name.



Appendix A: Technical Specifications

Camera		
Image Sensor		1/3" Sony Progressive CCD
Picture Elements		1280(H) x 960(V)
Resolution		>700 TVL
Shutter Speed		1 ~ 1/10000 sec.
Lens		
Lens Type	Varifocal lens/ Motorized lens	f = 3.3 ~ 12 mm F/1.4
Operation		
Video Compression		H.264 Baseline / MJPEG / MPEG-4
Video Streaming		Simultaneous
		H.264 + MJPEG
		MPEG-4 + MJPEG
		MJPEG + BNC
Resolution		H.264: 1280x960 / HD 720p / D1 / VGA / QVGA / CIF / QCIF
		MJPEG: 1280x960 / HD 720p / D1 / VGA / QVGA / CIF / QCIF
		MPEG-4: HD 720p / D1 / VGA / QVGA / CIF / QCIF
Frame Rate		H.264: 30 fps MJPEG: 30 fps MPEG-4: 30 fps
Image Setting	Brightness	Manual
	Exposure	Auto / Manual / Fixed shutter
	Backlight	On / Off
	Sharpness	Manual
	Contrast	Manual
	White Balance	Auto / Manual / Indoor / Outdoor
	Digital Zoom	1x ~ 16x
	Image Rotation	Flip, Mirror, and 180° Rotate
	WDR	Off / 4 Level Adjustment
	3D Noise Reduction	On / Off
Audio	Two-way Audio	Line out, Line in / Mic in
	Compression	G.711 / G.726
Alarm	Input	5V 10kΩ pull up
	Output	Photo relay output 300VDC/AC
Network		
Interface		10/100 Mb Ethernet (RJ45)
Protocol		TCP/IP, UDP, RTP, RTSP, HTTP, ICMP, FTP, SMTP, DHCP and

		IGMP
Password Levels		User and Administrator
Internet Browser		Internet Explorer (6.0+)
User Account		20
Mechanical		
Connectors	Power	3 pins terminal block
	Ethernet	RJ45
	Audio	4 pins terminal block
	Alarm	4 pins terminal block
	Analog Video	1.0 Vp-p / 75 Ω, BNC
LED Indicator		Power, Link, ACT
General		
Operating Temperature		-30°C ~ 50°C Humidity: 10% to 90%, no condensation
Power Source		DC 12V / PoE / AC 24V
Power Consumption		6W
Regulatory		CE, FCC, RoHS compliant
Dimension		Ø 151 x 130 mm (Indoor) Ø 170 x 210 mm (Outdoor)
Weight		1 kg (2.2 lbs)

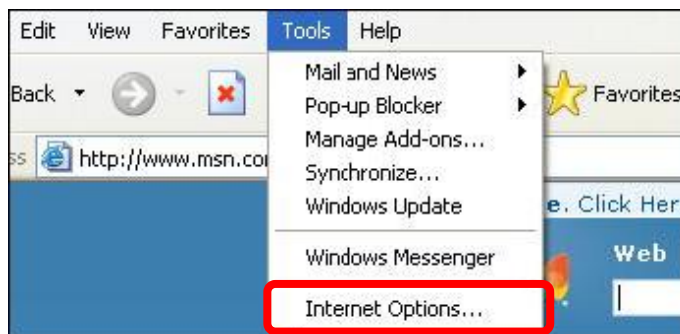
Appendix B: Internet Security Settings

If ActiveX control installation is blocked, please either set the Internet security level to default or change ActiveX controls and plug-ins settings.

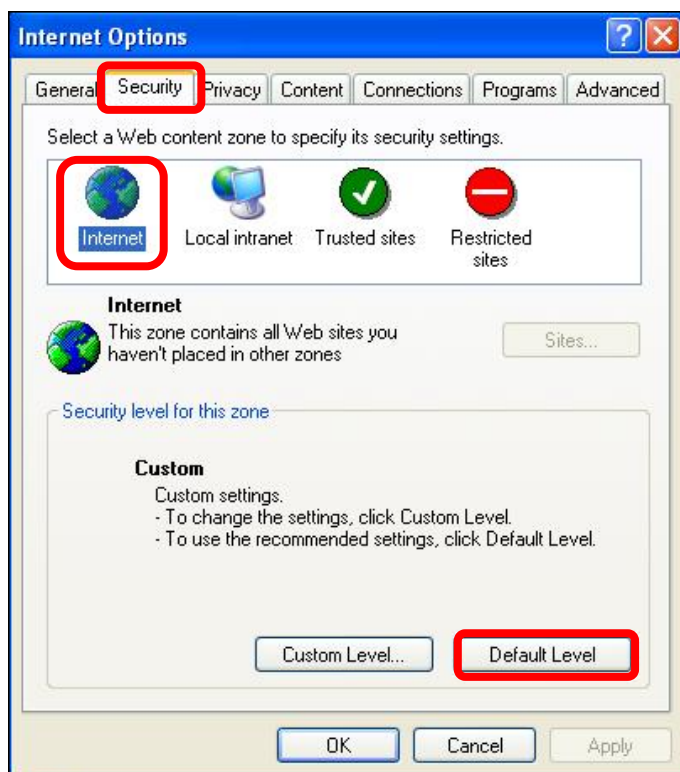
Internet Security Level: Default

Step 1: Start the Internet Explorer (IE).

Step 2: Select <Tools> from the main menu of the browser. Then Click <Internet Options>.



Step 3: Click the <Security> tab, and select <Internet>.

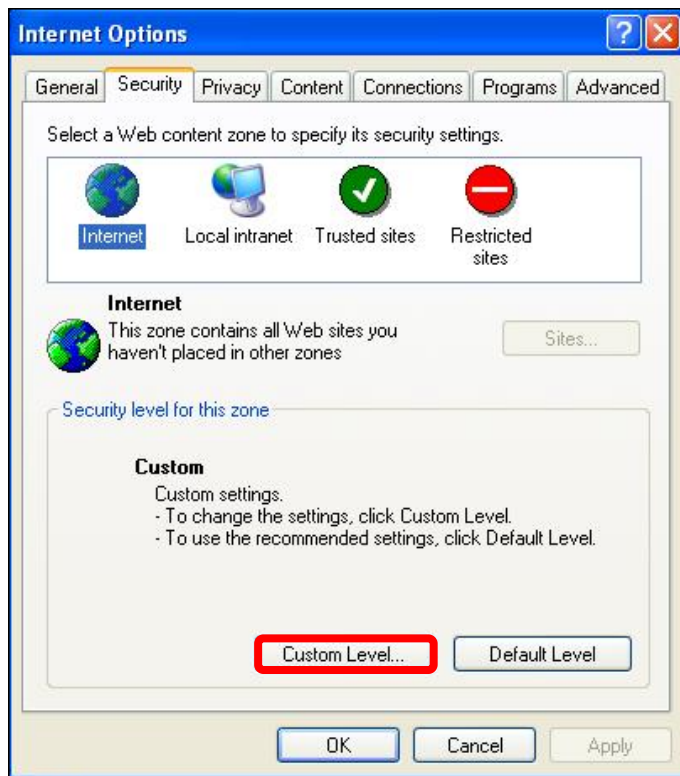


Step 4: Down the page, press “Default Level” (see the figure above) and click “OK” to confirm the setting. Close the browser window, and open a new one later when accessing the HD Mini-Dome Camera.

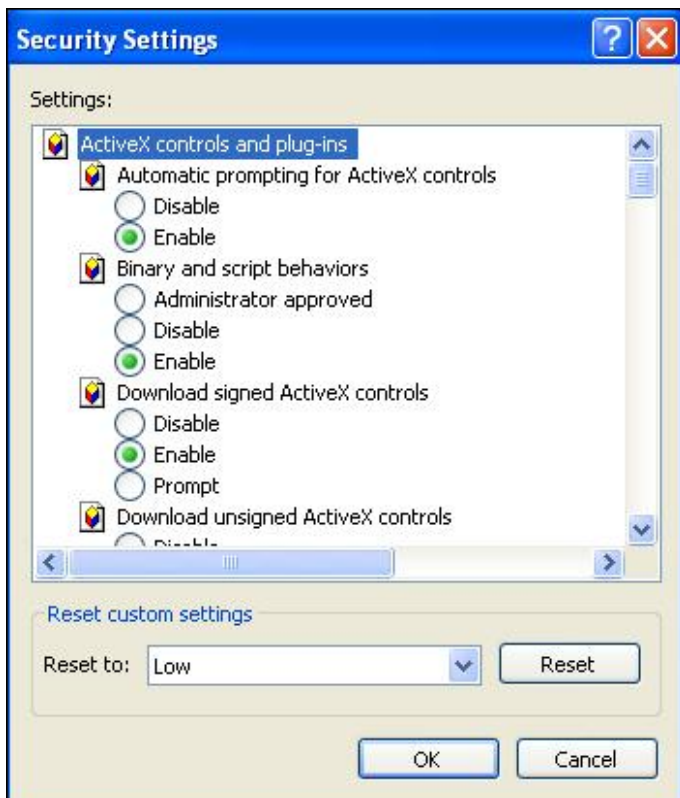
ActiveX Controls and Plug-ins Settings

Step 1–3: Refer to the previous section above.

Step 4: Down the page, press “Custom Level” (see the figure below) to change ActiveX controls and plug-ins settings.



The Security Settings screen is displayed as below:



Step 5: Under “ActiveX controls and plug-ins”, set ALL items (as listed below) to <Enable> or <Prompt>.

ActiveX controls and plug-ins settings:

1. Automatic prompting for ActiveX controls
2. Binary and scrip behaviors
3. Download signed ActiveX controls
4. Download using ActiveX controls
5. Initialize and script ActiveX not marked as safe
6. Run ActiveX controls and plug-ins
7. Script ActiveX controls marked safe for scripting

Step 6: Click <OK> to accept the settings and close the <Security> screen.

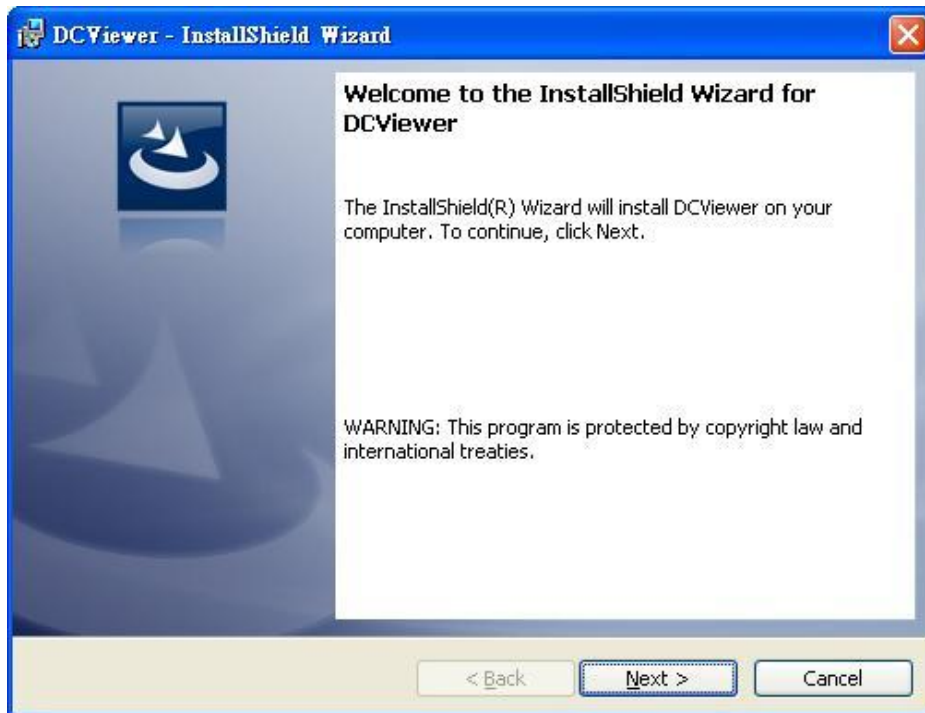
Step 7: Click <OK> to close the Internet Options screen.

Step 8: Close the browser window, and restart a new oneto access the HD Mini-Dome Camera.

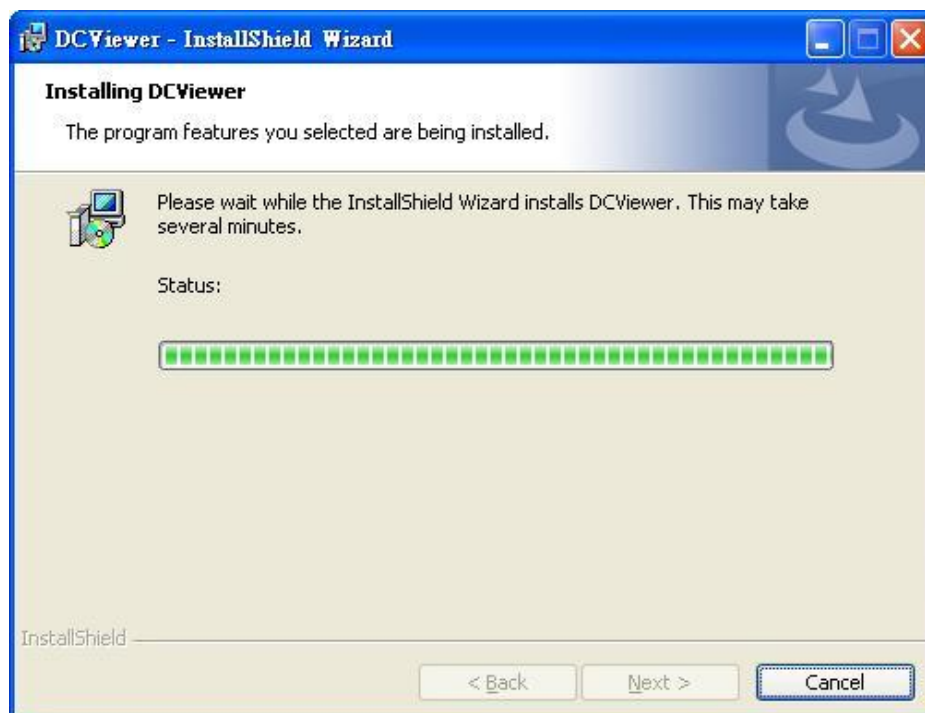
Appendix C: DC Viewer Download Procedure

The download procedure for the DC Viewer software download is as follows.

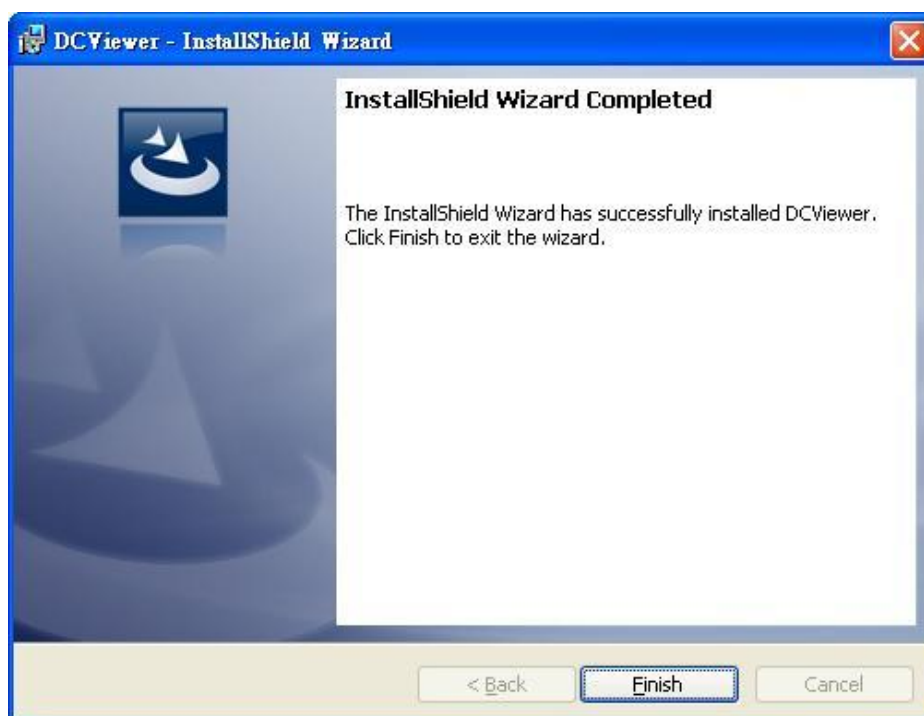
Step 1: In the DC Viewer installation page, click “Next” for starting installing.



Step 2: Setup starts. Please wait until the loading bar runs out.



Step 3: Click “Finish” to close the DC Viewer installation page.



Then, the HD Mini-Dome Camera's Home page will display as follows:

